DOCUMENT RESUME

ED 069 922 VT 017 850

TITLE	Working Papers on Career Education.
INSTITUTION	Bureau of Adult, Vocational , and Technical Education (DHEW/OE), Washington, D.C.
NOTE	193p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Bibliographies; *Career Education; Career Planning; Charts; Course Content; Course Organization; Educational Objectives; Elementary Grades; *Models; *Occupational Clusters; Occupational Information; School Organization; Secondary Grades
IDENTIFIERS	*Program Implementation

ABSTRACT

This document contains four working papers dealing with various aspects of career education. "Career Education: Description and Goals," prepared by E. L. Rumpf and others, defines career education and identifies and discusses eight characteristics and seven career education goals. "Career Education: A Model for Implementation," prepared by J. Dechman and others, suggests means by which the entire school program can be restructured to meet the goals and objectives of career education. A "Bibliography on Career Education," prepared by S. C. High, Jr., and L. Hall, lists documents, periodical articles, and information sources which either deal directly with the career education concept or are related to the concept. "Career Clusters: An Organizational Technique to Facilitate the Delivery of Career Education," prepared by staff committees of the Division of Vocational and Technical Education, provides first draft charts illustrating the nature and content of 15 career clusters. (SB)

ED 069922

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

WORKING PAPERS ON CAREER EDUCATION

Prepared by the
Division of Vocational and Technical Education
Bureau of Adult, Vocational, and Technical Education
U.S. Office of Education
Washington, D.C.

Paper No. 1 -- "Career Education -- Description and Goals," July 29, 1971

Paper No. 2 -- "Career Education -- A Model for Implementation," May 10, 1971

Paper No. 3 -- "Bibliography on Career Education," October 1972

Paper No. 4 -- "Career Clusters -- An Organizational Technique to Facilitate the Delivery of Career Education," January 3, 1972

VT017850

WORKING PAPER
July 29, 1971

CAREER EDUCATION: DESCRIPTION AND GOALS

prepared by

Edwin L. Rumpf
Michael Russo
Sherrill D. McMillen
Sidney C. High, Jr.
Albert J. Riendeau
Donald H. Snodgrass

Division of Vocational and Technical Education
Bureau of Adult, Vocational, and Technical Education
U.S. Office of Education
Washington, D.C.

July 29, 1971

CAREER EDUCATION

Career education provides for a broad approach to preparation for citizenship; provides job information and skill development; and also helps individuals develop attitudes about the personal, psychological, social and economic significance of work in our society. It develops and fosters avocational and recreational interests of individuals to help prepare for a well-rounded living in a world in which leisure time is increasing and greater opportunity for self-expression through creative production are available.

Career education is a comprehensive educational program which begins in grade 1 or earlier and continues through the adult years. For elementary and secondary education, the program includes a restructuring of basic subjects, grades 1-12, around the theme of career development, including opportunities and requirements in the world of work. The basic academic subjects, such as mathematics, science, social studies and language arts become more relevant because the student is helped to see the relationship to future career goals. In the elementary school, students are informed about the wide range of jobs in our economy, and the associated societal roles. In junior high school, students will explore specific clusters of occupations through hands-on experiences and field observation, as well as classroom instruction. In senior high school, students will prepare for job entry through classroom, laboratory and cooperative education activities and prepare for further education. Placement in a job or in further education are options open to all students. At the post-secondary and adult levels, opportunities will be provided for entrance and exit at any level, at anytime, in the individual's career development.

Extensive guidance and counseling activities assist the student in developing self-awareness and in matching his interests and abilities against potential careers.

CHARACTERISTICS

1. Career education helps students to develop a personal plan for lifelong learning which will include, learning about the world we live in, its people, the social and physical environment; learning about the sciences, arts, and literature we have inherited and are creating; and learning about the way in which the world's people are interacting. Effective career education equips individuals to live their lives as fulfilled human beings.

2. Career education is organized in a pyramid approach, beginning with career awareness in the elementary grades and moving from the general to the more specific orientation to the world of work. In junior high school, students are provided with exploratory experiences. These experiences in turn, provide knowledge and experience to assist decision-making regarding areas of study and more specific preparation which the student will pursue in senior high school, post-secondary and adult programs. Intensive guidance and counseling are provided concurrently with classroom instruction and skill development to improve the student's decision-making abilities.

3. Careers are studied in relation to fields of work or clusters of occupations which are related to each other, such as the construction occupations cluster, the health occupations cluster, or the fine arts and humanities cluster.

4. Emphasis is placed on using multi-media learning approaches such as films and video-tapes which may be more effective with students having a wide range of learning styles and skills. Types of instructional methods include classroom and laboratory activities, field observation, in-school skill training, work experience, cooperative education, and on-the-job training.

5. All students leaving high school will be prepared for, and actively assisted in securing placement in either a job, post-secondary education, or higher degree education.

6. Career education focuses on the needs of the individual, the needs of society, the economy, and employers.

7. Career education provides knowledge and experiences that enhance employment adaptability in a time of rapid changes due to technological advances and fluctuating economic trends.

8. Successful operation of a career education program will require actively participating advisory councils,composed of local employers and union representatives and involved community groups are essential.

GOALS OF CAREER EDUCATION

1. To make all education subject matter more meaningful and relevant to the individual through restructuring and focusing it around a career development theme.

2. To provide all persons the guidance, counseling, and instruction needed to develop their self-awareness and self-direction; to expand their occupational awareness and aspirations; and to develop appropriate attitudes about the personal and social significance of work.

3. To assure the opportunity for all persons to gain an entry level marketable skill prior to their leaving school.

4. To prepare all persons completing secondary school with the knowledge and skills necessary to pursue further education or to become employed.

5. To provide services for placing every person in the next step in his development whether it be employment or further education.

6. To build into the educational system greater utilization and coordination of all community resources.

7. To increase the educational and occupational options available to all persons through a flexible educational system which facilitates entrance and re-entry either into the world of work or the educational system.

GOAL 1

Goal: To make all education subject matter more meaningful and relevant to the individual through restructuring and focusing it around a career development theme.

The learning of language arts, mathematics, sciences, and social studies in the abstract, without practical application, has limited students' abilities to find meaning and relevance in their school work. The present system which emphasizes abstract reasoning has been particularly detrimental to those youngsters whose strength are other than in the abstract, verbal and quantitative areas. It has so separated academic learning at all levels of education from reality, that even those students who reject the "establishment" do so without the practical skills necessary to bring about the change they see as essential.

Schools which restructure and focus basic subject areas around the career development theme will be able to capitalize on the interests and motivations of the student. Basic skills will become useful tools in reaching the goals set by students, because they will be able to identify career interests to which they may relate their education.

Redirecting basic subject areas to include career development objectives will provide the focus for activity-centered learning and permit laboratory application for abstract basic skills.

GOAL 2

Goal: To provide all persons the guidance, counseling, and instruction needed to develop their self-awareness and self-direction; to expand their occupational awareness and aspirations; and to develop appropriate attitudes about the personal and social significance of work.

The objectives of career development for a specific individual are so broad that few, if any, school staff members could provide all the experiences necessary for their accomplishment. Such objectives include: (a) helping the students to view themselves as a worthwhile person; (b) assisting the students to experience success in their own eyes; (c) helping the students to consider, understand, and assess the values of a work-oriented society; (d) assisting the students to develop an appreciation of their own talents and interests; (e) helping the students to make appropriate choices from the widest possible range of alternatives available; (f) helping the students to formulate plans for implementing decisions which they have made; (g) helping the students to accept personal responsibility for such decisions; and (h) guiding the students into kinds of education and employment that will prepare them to implement the decisions they have made.

The Herculean nature of this task is compounded by the inadequate self-concepts of disadvantaged youth and adults; the limited range of work and learning experiences available to some minority group and rural students; and the deteriorating conditions in some urban schools. Many youths have limited contacts with work role models from which they might pattern their behavior and aspirations.

With career education, the focus of all education is to expand the student's awareness of others, self-awareness, self-direction, occupational-awareness, and aspirations. All teachers, counselors, and administrators should accept and work toward these objectives. The entire community becomes the student's arena for exploration and for the identification of their own role models. In this way, schools can assist in the development of students who will become mature decision-makers about careers and the personal and social significance of work.

GOAL 3

Goal: To assure the opportunity for all persons to gain an entry level marketable skill prior to their leaving school.

The purpose of including exploratory experience and some occupational preparation beginning in the junior high schools is to provide marketable skills for all, regardless of when they choose to leave school. Occupational preparation will become more sophisticated as the student progresses through high school and masters concepts at increasingly higher levels of complexity.

GOAL 4

Goal: To prepare all persons completing secondary school with the knowledge and skills necessary to pursue further education or to become employed.

All persons completing secondary school will be prepared to exercise two basic options--immediate employment and/or further education. This requires a curriculum which offers every student in secondary school the opportunity to develop a marketable skill. Emphasis will be given to the basic communication and computational skills necessary for a broad range of gainful employment and educational opportunities. Additionally, each student will be equipped with at least minimal job entry level skills in one of the job clusters. This will be accomplished in a variety of ways, including but not limited to: (1) enrollment in vocational education programs, (2) work experiences in the community, or (3) participation in some other occupational education experience.

Some students will elect not to pursue further education immediately after completing secondary school. These students will be provided an in-depth vocational education program to develop their knowledge and skills in a family of occupations within a job cluster. (For example: air pollution abatement and control within the environment cluster; fashion merchandising within the marketing and distribution cluster.) Basic knowledge essential to performing in other families of occupations within the job cluster will also be acquired by each student. Relationships of families within the cluster and between clusters will be explored so that students will continuously be aware of additional opportunities available. They will be encouraged to pursue the necessary further education as their occupational aspirations broaden. It is essential, therefore, for students in a vocational education program to be equipped with the academic skills essential to the pursuit of further education in the field of their career interest.

Each senior high school student will receive the following kinds of experiences:

(1) A "core" curriculum in the occupational cluster of his choice. This core curriculum will build upon the exploratory and entry-level skill development experiences at the junior high level and will provide higher levels of skill development when these skills are common to all the occupations in the cluster. Students preparing for job entry and students preparing for higher education would be enrolled in the cluster curriculum.

(2) Basic subject matter areas such as language arts, social studies, mathematics, and science which are related to and which support the cluster core curriculum selected by the student.

(3) A choice of electives designed specifically for job preparation and/or a choice of electives designed specifically to prepare for entry into further education in an area of his choice.

Consequently, all persons completing secondary school will be prepared to exercise two basic options--immediate employment and/or further education.

An attempt will be made to provide some work experience for all students sometime during their secondary school enrollment. Arrangements will be entered into with business, industry and other employees for the purpose of providing students with job entry level skills. Continued emphasis will be given to cooperative vocational education as one effective method of providing in-depth training for occupations.

Many students will choose to prepare for further education while in secondary school. These students will have limited time for in-depth occupational preparation. Minimal job entry level skills will be developed by these students through the cluster program, and the technique of work experience as discussed above, or through participation in some other occupational education experience.

GOAL 5

Goal: To provide services for placing every person in the next step in his development whether it be employment or further education.

The school system will provide a placement service which will assist every person leaving school to enter into the next step of his development.

The placement service will give special consideration to those persons leaving school before completing grade 12. Efforts will be undertaken to help the students find gainful employment based upon their previous experiences. Short term courses to provide at least minimal job entry level skills for those persons leaving school before acquisition of basic job skills will be made available.

Students requesting assistance for job placement will be referred to specific job openings and assisted in every possible way to gain employment. Students who are leaving the geographical area of the school system will be referred to appropriate resource people at the new location. The placement service will be available to both youth and adults served by the schools.

A student choosing further education upon completion of secondary school will be assisted in locating and applying for entrance into an institution appropriate for his needs. Students will be assisted in every possible way to gain acceptance for enrollment.

GOAL 6

Goal: To build into the educational system greater utilization and coordination of all community resources.

There will be comprehensive planning for education which utilizes and coordinates all community resources as appropriate, in order to reach the goals and objectives of career education. Such planning will encompass the resources of public and private schools from early childhood education through grade 12, public and private post-secondary institutions, public and private colleges and universities, business, industry, labor, individual practitioners, and any other public or private resource which will make education more meaningful and relevant. The total community will be involved in planning and implementing the educational program.

GOAL 7

Goal: To increase the educational and occupational options available to all persons through a flexible educational system which facilitates entrance and re-entry either into the world of work or the educational system.

Emphasis will be given to making the educational system flexible in its entrance and exit requirements so that all persons may acquire the educational and occupational experiences to meet their needs when they want them. In other words, there will be no "dropouts" from the system.

Persons will be assisted by the school system to enter the world of work before completing secondary school when this option is exercised. The school system will be flexible enough in its re-entry requirements to permit all persons to continue their formal education when they desire. Alternatives such as re-entry into regular day school, evening school, or correspondence school and leaving opportunities through educational media will be utilized to accommodate the student's options directed toward the furthering of this formal education. Instruction will be individualized to meet the student's needs, while at the same time meeting basic requirements for graduation, or completion of prescribed curriculum.

Extensive adult classes will provide all persons with a means of upgrading or updating knowledge for their present employment or to acquire knowledge for new employment throughout their lifetime. Schools will need to cooperate with business and industry and various public and private agencies and institutions to assure all persons access to the training necessary for them to keep abreast of the changing job market created by technological change and other factors.

Career guidance and counseling services will be made available to all youth and adults leaving the system or planning for re-entry into the system.

WORKING PAPER
May 10, 1971

CAREER EDUCATION: A MODEL FOR IMPLEMENTATION

prepared by

Joyce Dechman
Nancy Rhett
Sidney C. High, Jr.

Division of Vocational and Technical Education
Bureau of Adult, Vocational, and Technical Education
U.S. Office of Education
Washington, D.C.

Career Education -- A Model for Implementation

The central purposes of education--to prepare the young to accept the reality of constructive pathways to adulthood, to help them engage these pathways successfully, and to assist them in finding personal relevance in the life options available to them--are not being effectively accomplished for large numbers of youth in the school systems of our Nation. The day in which academic preparation needed to be the sole end product of the school system has long ago passed; yet schools are still operating on that basis, with learning for the world of work occurring on a piecemeal and fragmented basis.

One of the goals toward which the education system must direct itself is the provision for every student to acquire the skills which will allow him to make a livelihood for himself and for his future family, no matter at what level of the educational system he leaves. Such skills are not confined to the manipulative skills; they are all those by which one can use his capabilities in activities which contribute both to individual fulfillment and society's maintenance and progress.

Dr. Sidney P. Marland, U. S. Commissioner of Education, in his speech before the National Association of Secondary School Principals in Houston, Texas, on January 23, 1971, indicated his concern for the Nation's young people and their opportunity to prepare realistically for today's world of work. He asked "Shall we persevere in the traditional practices that are obviously not properly equipping fully half or more of our young people or shall we immediately undertake the reformation of our entire secondary education in order to position it properly for maximum contribution to our individual and national life?"

To make public education become relevant according to today's needs and the needs of the future, the entire school program must be restructured; and it is becoming increasingly evident that public education should be focused around the theme of career development. Recognizing this, the U. S. Office of Education has selected career education as a major program priority. Dr. Marland announced in the same speech that career education "will be one of a very few major emphases of the U. S. Office, priority areas in which we intend to place maximum weight of our concentrated resources to effect a thorough and permanent improvement."

Career education is a comprehensive educational program focused on careers, which begins in grade 1 or earlier and continues through the adult years. For elementary and secondary education, the program includes a structuring of basic subjects, grades 1-12, around the theme of career opportunities and requirements in the world of work. In elementary school, students are informed about the wide range of jobs in our society and the roles and requirements involved. In junior high school, students may explore several specific clusters of occupations through hands-on experiences and field observation, as well as classroom instruction. They will be assisted in selecting an occupational area for further specialization at the senior high level. In senior high school, students pursue their selected occupational area, exercising one of three options--intensive job preparation for entry into the world of work immediately upon leaving high school, preparation for postsecondary occupational education, or preparation for four-year college. (See Table 1 suggesting career development experiences for each grade level.)

Those students preparing for postsecondary occupational education or four-year college entry will continue to be provided occupational cluster experiences including work experience where possible, with the academic subject areas being related to the professional area for which they are preparing. Students engaging in specialized job preparation will be provided with basic academic skills essential for further education. Consequently every student will leave the system with at least entry-level job skills and with facility in basic academic subjects sufficient to enable entry into further education.

Career education not only provides job information and skill development but also helps students to develop attitudes about the personal, psychological, social, and economic significance of work. Extensive guidance and counseling activities assist the student in developing self-awareness and in matching his interests and abilities against potential careers.

Finally, placement into an entry-level job or further education is guaranteed for every student in an effective career education program.

Thus, comprehensive career education includes a sequentially-developed education program offering career orientation, exploration, and job preparation for all students. A major benefit is that students' performance in basic subjects should improve as the entire curriculum is made relevant and more meaningful by being focused and unified around career education. Intensive guidance and counseling assist students in development of self-confident, mature personal attitudes; and guaranteed placement assures that the educational system will assume responsibility for the development of every student, meeting the need for accountability.

Occupational clusters, representative of the entire world of work and around which a career education system might be designed, are:
Business and Office Occupations, Marketing and Distribution Occupations, Communications and Media Occupations, Construction Occupations, Manufacturing Occupations, Transportation Occupations, Agri-Business and Natural Resources Occupations, Marine Science Occupations, Environmental Control Occupations, Public Services Occupations, Health Occupations, Hospitality and Recreation Occupations, Personal Services Occupations, Fine Arts and Humanities Occupations, and Consumer and Homemaking-Related Occupations.

It is assumed that in preparing a new career education curriculum, relevant curriculum materials which have already been developed will

TABLE I

SUGGESTED CAREER EDUCATION EXPERIENCES GRADES 1-12

<table>
<tr><td colspan="4">GRADES: 1 → 12</td><td rowspan="6">100% PLACEMENT</td><td rowspan="4">JOB</td></tr>
<tr><td colspan="4">The phases of the program can be scheduled at grade levels compatible with the local grade structure.</td></tr>
<tr><td>STUDENT DEVELOPS</td><td>SELF-AWARENESS AND</td><td>UNDERSTANDING OF HIS</td><td>INTERESTS AND ABILITIES</td></tr>
<tr><td>STUDENT DEVELOPS</td><td>AND PRACTICES DECISION-</td><td>MAKING SKILLS</td><td></td></tr>
<tr><td>STUDENT DEVELOPS</td><td colspan="3">ATTITUDES ABOUT THE PERSONAL, SOCIAL, AND ECONOMIC SIGNIFICANCE OF WORK</td><td>NON-BACCALAUREATE PROGRAM</td></tr>
<tr><td>OCCUPATIONAL AWARENESS:
Student is informed about occupations through a series of clusters representing the entire world of work.</td><td>OCCUPATIONAL ORIENTATION AND EXPLORATION:
Student explores several clusters of his choice.</td><td>OCCUPATIONAL EXPLORATION IN DEPTH, BEGINNING SPECIALIZATION:
Student selects one cluster to explore.
Develops entry-level skill.
May change cluster if desired.</td><td>SPECIALIZATION:
Student specializes in one cluster.
Takes prerequisites for further education and/or intensive skill training for job entry.</td><td>BACCALAUREATE PROGRAM</td></tr>
</table>

be used, with supplementary developmental efforts being conducted as necessary. A great deal of curriculum of this type is already "on the shelf," and more is being produced at this time. Examples of course materials already available for occupational awareness and exploration purposes are "The World of Construction" and "The World of Manufacturing," which were developed under a U. S. Office of Education grant at the Ohio State University, and materials developed for use at the elementary school level in Georgia, Texas, and New Jersey. Of course, extensive and well-validated curriculum materials are already available for job preparation in many occupations, such as electronics, clerical, stenographic, etc.

The development of a new career education system will require the accomplishment of differing objectives at each level of the existing school system. A list of these objectives along with some discussion of procedures for accomplishing them follows:

For Grade levels K-6 the objectives are:

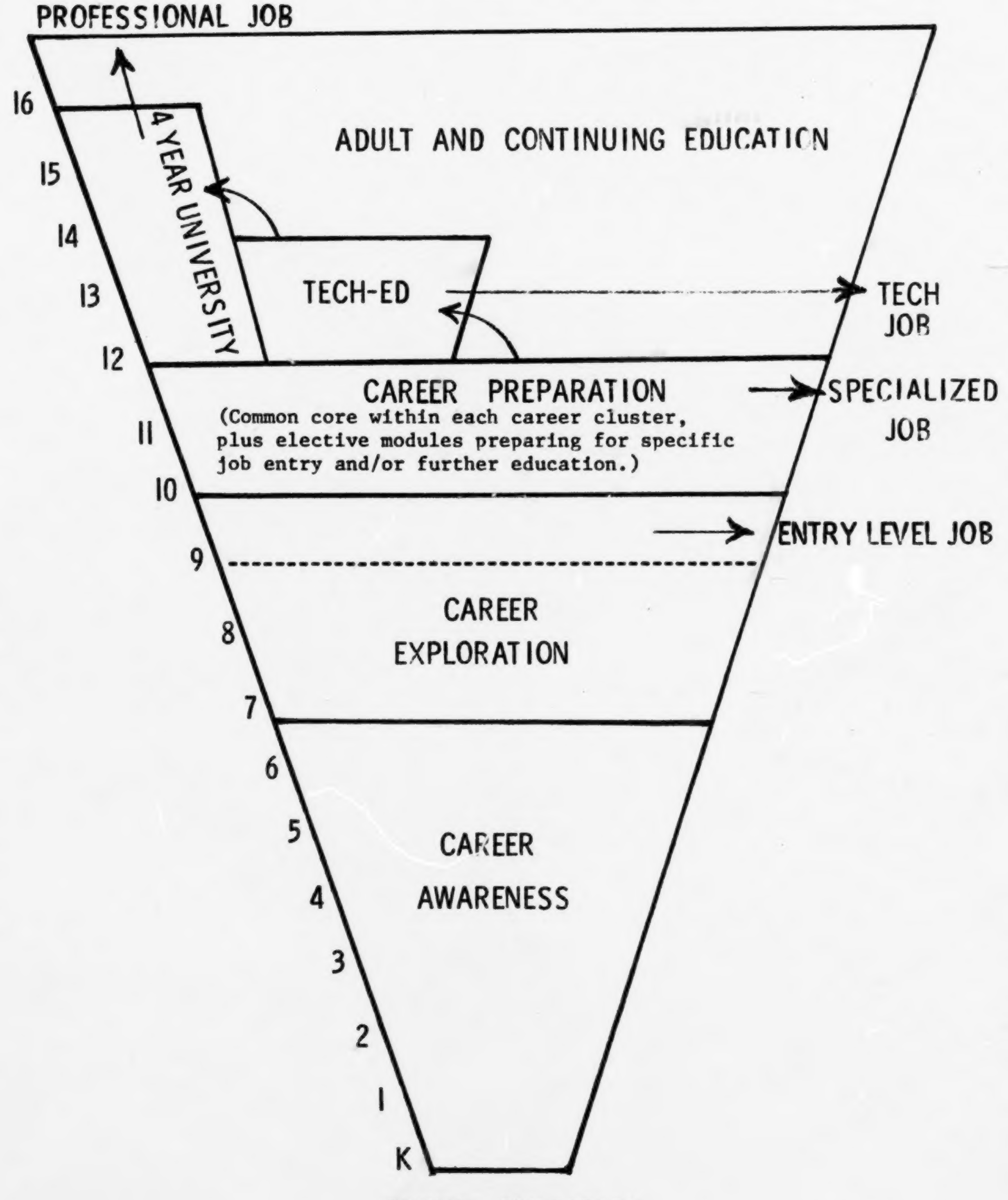
-- to develop in pupils attitudes about the personal and social significance of work;
-- to develop each pupil's self-awareness;
-- to develop and expand the occupational awareness and the aspirations of the pupils'
-- to improve overall pupil performance by unifying and focusing basic subjects around a career development theme.

The career education objectives at the 7th and 8th grade levels would be:

-- to provide experiences for students to assist them in evaluating their interests, abilities, values and needs as they relate to occupational roles;
-- to provide students with opportunities for further and more detailed exploration of selected occupational clusters, leading to the tentative selection of a particular cluster for indepth exploration at the 9th grade level;
-- to improve the performance of students in basic subject areas by making the subject matter more meaningful and relevant through unifying and focusing it around a career development theme.

Grade level 9 and 10 career education objectives include:

-- to provide indepth exploration and training in one occupational cluster leading to entry-level skill in one occupational area and providing a foundation for further progress, leaving open the option to move between clusters if desired;
-- to improve the performance of students in basic subject areas by making the subject matter more meaningful and relevant through unifying and focusing it around a career development theme;



CAREER EDUCATION

-- to provide guidance and counseling for the purpose of assisting students in selecting an occupational specialty for 11th and 12th grade levels with the following options: intensive job preparation, preparation for postsecondary occupational programs, or preparation for a four-year college.

For Grades 11 and 12, objectives for career education would be:

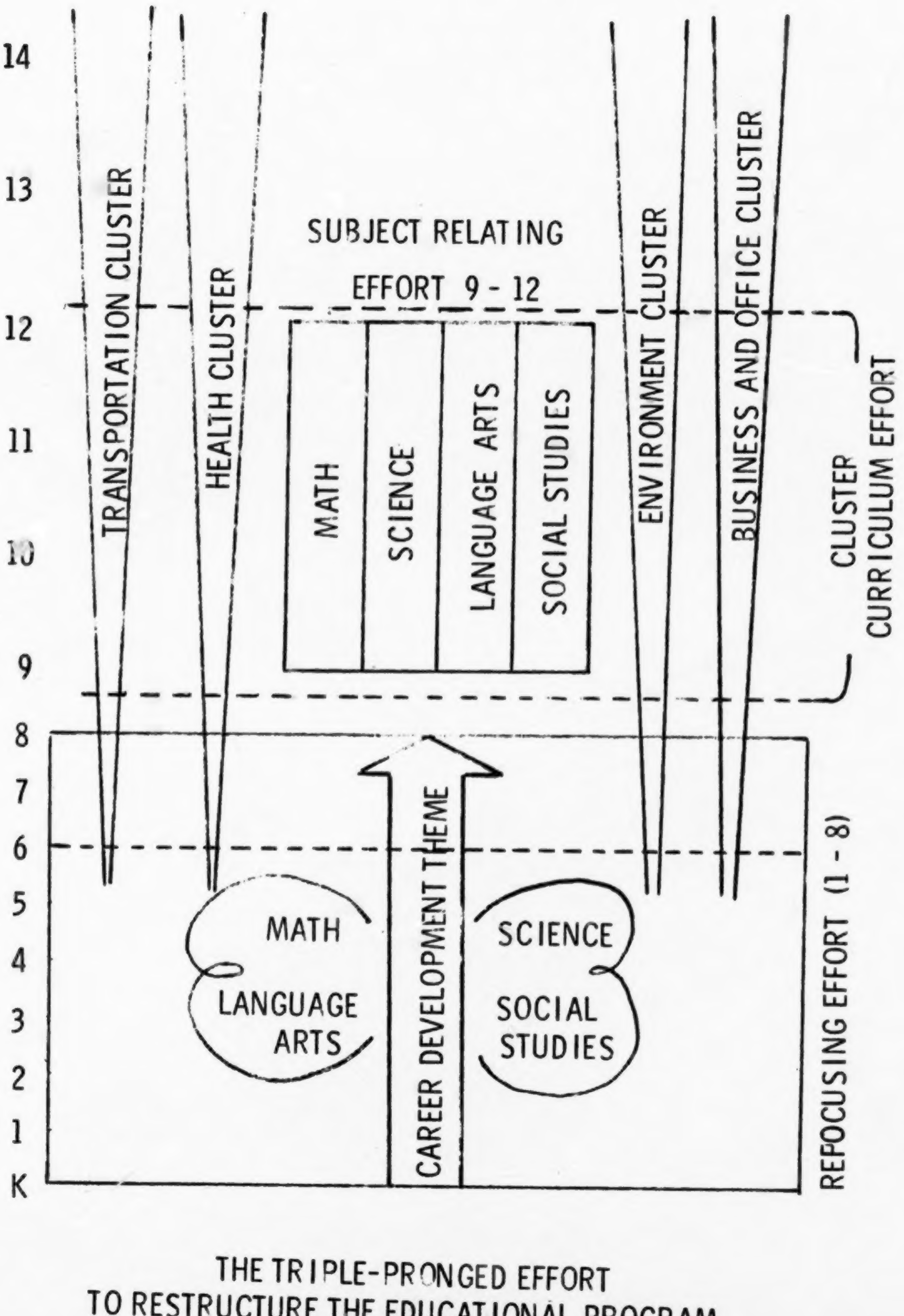
-- to provide every student intensive preparation in a selected occupational cluster, or in a specific occupation, in preparation for job-entry and/or further education;

-- to increase the student's motivation to learn by relating his studies to the world of work;
-- to provide intensive guidance and counseling, in preparation for employment and/or further education;
-- to insure placement of all students, upon leaving school, in either: (a) a job, (b) a postsecondary occupational education program or (c) a four-year college program;
-- to maintain continuous follow-through of all dropouts and graduates and to use the resulting information for program revisions.

A set of procedures has been designed by U.S.O.E.'s Bureau of Adult, Vocational, and Technical Education through which a school system might restructure its present activities in order to implement an educational program to meet the career education objectives outlined above.

Curriculum development at all grade levels, K-12, represents the central procedure around which other supporting activities would function. The curriculum development undertaking is actually a triple-pronged effort involving (1) an occupational cluster curriculum effort, (2) a curriculum refocusing effort for grades 1-8, and (3) a subject-matter relating effort in grades 9-12.

The largest and most involved component of the curriculum development undertaking is the cluster curriculum effort. This effort will involve 15 separate task forces, one for each of the 15 occupational clusters mentioned in the previous pages. Each of these cluster task forces will develop, in its occupational cluster, complete cluster-core curriculums for grades 9-12. Suitable instructional materials and media will be selected and/or developed for each occupational area. Each cluster task force will also develop, for its occupational cluster, a one-semester exploratory curriculum for grade 7 and 8 students, to include onsite observation, work experience, hands-on laboratory experience, role playing, and other appropriate activities. Suitable instructional materials and media will be selected and/or developed for this one-semester exploratory curriculum in each occupational cluster. Each cluster task force will also provide guidelines and material for use in grades K-6 and will insure that occupational information provided at the elementary school level is technically accurate and comprehensive.



THE TRIPLE-PRONGED EFFORT
TO RESTRUCTURE THE EDUCATIONAL PROGRAM
AROUND CAREER EDUCATION

The second component of the curriculum development undertaking is a major curriculum refocusing effort for grades 1-8. The task force responsible for this effort will create a system of behavioral objectives for grades 1-8 that reflect career development concepts and respond to differences in learner characteristics. Then four sub-task forces will be created, one each in the language arts, mathematics, sciences, and social studies. Each of the sub-task forces will select those career development behavioral objectives which can best be met in its subject area and will refocus that subject's curriculum around the career development behavioral objectives. After the subject area curriculums have been refocused, appropriate learning interventions will be chosen or developed by each of the sub-task forces. Products of current and recent curriculum development efforts will, of course, be analyzed and where appropriate to the career education concept, will be utilized, adapted, or built upon.

The third component of the curriculum development undertaking will be a subject matter relating effort for grades 9-12. For this effort, four subject area task forces will be established to relate the subject areas taught at grades 9-12 (science, language arts, social studies, and math) to the content of the curriculums established by the cluster curriculum task forces. The subject area task forces will identify those competencies necessary to each occupational cluster and will insure the inclusion of these competencies in the subject area objectives and activities. The resulting reoriented subject area curriculum will provide activities which are clearly identified with the occupational cluster and/or the specific occupation for which the student is preparing. The subject areas will be refocused around the occupational theme in such a way as to make the basic subject matter more meaningful and relevant to the students, thereby improving the student performance in the subject areas themselves.

Supporting the central curriculum development undertaking will be a variety of other activities. In most school systems, the hiring of additional counselors, para-professionals, and other personnel will be necessary to supplement existing staff with the numbers and types of people needed to implement the expanded and enriched career education offerings. Inservice education must be provided for supervisors, teachers, counselors, and paraprofessionals in order to familiarize them with the overall career education concepts and provide them with specific training in use of the new instructional materials and media. During the first year, when it will be necessary for all teachers to rework their lesson plans and make many changes in their instructional procedures, the local school district will probably want to provide overtime pay for the additional hours which the teachers will be putting in.

Additional equipment, tools, supplies, materials, and facilities will be needed for implementation of the career education program. These will vary from simple tools and materials used in the elementary grades, through the more complex apparatus needed for exploratory purposes at the junior high school level and on into complicated and sophisticated equipment and facilities which may be needed at the senior high school level in each of the 15 clusters. It is believed, however, that a great deal of the equipment and facility problem can be alleviated by expanding the use of work experience programs, cooperative vocational education programs, and other measures to utilize existing facilities and equipment whitin the business and industrial community.

An obvious supporting activity which will be needed is the establishment of advisory councils in each of the occupational clusters. These councils should include representatives from management, labor, and various Government agencies. Steps must also be taken to establish an active and well-staffed placement service, which will work constantly to place all youngsters either in a job or in further education when they exit from the school system. The placement service will also establish and maintain a follow-through system in order to maintain contact with and secure feedback from former students.

The model presented here will effectively promote educational change in the direction of increased relevancy and meaning for young people.

WORKING PAPER
OCTOBER 1972

BIBLIOGRAPHY ON CAREER EDUCATION

prepared by

Sidney C. High, Jr.
Linda Hall

Division of Vocational and Technical Education
Bureau of Adult, Vocational, and Technical Education
U. S. Office of Education
Washington, D. C.

26

TABLE OF CONTENTS

Page

Introduction 1

Special Ordering Instructions for ERIC Documents 2

Section I: Selected References on Career Education 3

Section II: Journal Articles 9

Section III: Background References Related to Career Education 14

Section IV: Continuing Sources of Information 62

INTRODUCTION

The period from 1965 to 1972 saw the emergence of numerous journal articles and documents which were related to the type of educational program now referred to as "career education." This bibliography cites some of the more significant of these articles and documents.

The bibliography is divided into four sections. Section I, which is entitled "Selected References on Career Education," lists key documents dealing with the career education concept itself. Section II, which is entitled "Journal Articles," lists a variety of articles which have appeared in periodicals, dealing with the career education concept and some of its component parts. Section III, which is entitled "Background References Related to Career Education," lists numerous documents related to the career education concept or to various components and aspects of career education. Section IV, which is entitled "Continuing Sources of Information," lists several key information sources from which a continuing flow of career education information can be obtained in the future.

Many of the documents which are cited in Section I and Section III are now available through the ERIC System. Those documents which are identified by an "ED" number have been processed into the ERIC Collection and can be obtained from the ERIC Document Reproduction Service in accordance with the "Special Ordering Instructions" which are given on the following page. The documents not identified by an "ED" number must be ordered from the agency or organization which published them, as indicated at the end of each such entry. The journal articles, of course, must be located in back issues of the appropriate journals.

It is hoped that this bibliography will be useful to persons interested in familiarizing themselves with the career education concept and with some emerging techniques for the implementation of career education programs.

SPECIAL ORDERING INSTRUCTIONS FOR ERIC DOCUMENTS

Reproduced copies of final reports of research projects, as well as other research-related documents and educational resource materials, can be ordered either in "hard copy" or on microfiche. "HC" stands for hard copy, which is ready-to-read material reproduced page by page on special paper.

"MF" stands for microfiche, which is a reproduction of up to seventy original pages on a single sheet of 4 X 6-inch film. Microfiche readers, available from many manufacturers, are required to enlarge the microfiche images for reading purposes.

Reproduced copies of final reports, other research-related documents, and/or educational resource materials cost $3.29 for each 100-page increment of hard copy or 65 cents for the entire document on microfiche.

In ordering documents, the following information must be furnished:

- The "ED" numbers of the desired documents (titles need not be furnished).
- The type of reproduction desired (hard copy or microfiche).
- The number of copies being ordered.

Payment must accompany orders totaling less than $10. There is no handling charge for any order. The ERIC Document Reproduction Service is registered to collect sales taxes, and orders from States which have sales tax laws must include payment of the appropriate tax or include tax exemption certificates.

All mail orders should be sent to the following address:

ERIC Document Reproduction Service
Post Office Drawer "O"
Bethesda, Maryland 20014

To facilitate rapid turnaround for priority requests, a "walk-in" order service is available at the ERIC Document Reproduction Service Facility:

LEASCO Information Products, Inc.
4827 Rugby Avenue
Bethesda, Maryland 20014

SECTION I
SELECTED REFERENCES ON CAREER EDUCATION

1. Marland, Sidney P., Jr. Career Education Now. Speech delivered before the Convention of the National Association of Secondary School Principals, Houston, Texas, January 23, 1971. (ED-048-480)

2. Marland, Sidney P., Jr. Career Education: More Than A Name. Speech delivered before the annual meeting of the State Directors of Vocational Education, Washington, D.C., May 4, 1971. (ED-050-295)

3. Marland, Sidney P., Jr. Career Education. Presentation at the International Conference on Education in Geneva, Switzerland, September 1971. (ED-056-203)

4. Marland, Sidney P., Jr. Career Education: Three Speeches By the Commissioner. December 1971. (ED-062-527)

5. "Marland on Career Education." Reprinted from American Education, November 1971. (Available from U.S. Government Printing Office under Catalog No. HE 5.280:80076; price 10 cents.)

6. Worthington, Robert M. Career Education and the Community-Junior College. January 1972. (ED-062-520)

7. Worthington, Robert M. The RCU's Role in Implementing the Career Education Concept. March 1972. (ED-062-558)

8. "Relating Education to Career Needs." Chapter XI in Schools, People, and Money; The Need for Educational Reform: Final Report of the President's Commission on School Finance. March 1972. (Available from U.S. Government Printing Office, Washington, D.C. 20402; Stock Number 1972-0-456-808, price one dollar.) (ED-058-473)

9. "No Room at the Bottom: Career Education -- Marketable Skills For All." Chapter IV in Annual Report of the U.S. Commissioner of Education, Fiscal Year 1971. (Available from U.S. Government Printing Office under Catalog No. HE 5.211:11032-72; price $1.25.)

10. Career Education: Report of the AVA Task Force on Career Education. 1972. (Available from American Vocational Association, 1510 H Street, N.W., Washington, D.C. 20005; Stock No. 47272; price three dollars.)

11. Herr, Edwin L. Unifying an Entire System of Education Around a Career Development Theme. March 1969. (ED-045-856/VT-008-896)

12. Herr, Edwin L. Review and Synthesis of Foundations for Career Education. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; March 1972. (ED-059-402)

13. Mangum, Garth L. and others. Career Education: A Handbook for Implementation. Salt Lake City, Utah: Olympus Research Corporation; February 1972. (Available from U.S. Government Printing Office under Stock No. 1780-0926; price 55 cents.) (ED-062-521)

14. Evans, Rupert N., Kenneth Hoyt, Edward Mackin, and Garth Mangum. Career Education: What It Is and How to Do It. 1972. (Available from Olympus Research Corporation, 955 East 9th South, Salt Lake City, Utah 84102; price four dollars.)

15. Goldhammer, Keith and Robert E. Taylor. Career Education: Perspective and Promise. Columbus, Ohio: Charles E. Merrill Publishing Company, 1972. (Price: $5.95)

16. Goldhammer, Keith. Career Education: An Educational Concept. January 1972. (ED-062-520)

17. Swanson, Gordon I. Facts and Fantasies of Career Education. April 1972. (ED-062-539)

18. Morgan, Robert L. and others. Synopses of Selected Career Education Programs: A National Overview of Career Education. April 1972. (ED-063-461)

19. Career Education. 16-page U.S. Office of Education pamphlet outlining the concept, December 1971. (ED-059-396)

20. Working Paper: Career Education -- Description and Goals. Washington, D.C.: Division of Vocational and Technical Education, U.S. Office of Education; July 1971.

21. Working Paper: Career Education -- A Model for Implementation. Washington, D.C.: Division of Vocational and Technical Education, U.S. Office of Education; May 1971.

22. Miller, A.J. Strategies for Implementing Career Education: A School Based Model. April 1972. (ED-062-539)

23. Reinhart, Bruce. School Based Comprehensive Career Education Model. January 1972. (ED-062-520)

24. Developmental Program Goals For The Comprehensive Career Education Model; Preliminary Edition. (181-page booklet identifying eight broad elements and 32 themes for career education, as well as goal statements for each theme.) Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; August 1972.

25. Palo Alto Educational Systems, Inc. A First Step Toward Career Education: A Project to Identify, Compile, Catalogue, Analyze and Assess Past and Present Career Education Efforts to Support Comprehensive Career Education Model I Objectives -- Volume I and Volume II. January 1972. (ED-060-224)

26. Banathy, Bela H. and Robert M. Peterson. Employer Based Career Education: A Model Developed At The Far West Laboratory for Educational Research and Development. April 1972. (ED-062-539)

27. Rhyne, R.F. and others. A Futures Perspective on Employer-Based Career Education, 1971-2000. October 1971. (ED-061-733)

28. Butler, Cornelius F. The Home-Community Based Model of the U.S. Office of Education's Career Education R&D Program: A Synopsis. April 1972. (ED-062-539)

29. Abstracts of Research and Development Projects in Career Education. Washington, D.C.: Division of Vocational and Technical Education, U.S. Office of Education; June 1972. (ED-063-520)

30. Bottoms, Gene. Career Development Education; K Through Post Secondary and Adult Education. (ED-062-580)

31. Bottoms, Gene. Orientation to New Concepts and Programs of Career Orientation and Occupational Education for Students in Rural Areas. Raleigh, North Carolina: Center for Occupational Education, North Carolina State University; December 1970. (ED-057-966)

32. Bottoms, Gene and Kenneth B. Matheny. A Guide for the Development, Implementation, and Administration of Exemplary Programs and Projects. September 1969. (ED-040-301)

33. Abstracts of Exemplary Projects in Vocational Education. Washington, D.C.: Division of Vocational and Technical Education, U.S. Office of Education; November 1971. (ED-060-189)

34. Morgan, Robert L. The Plan for Implementation of an Exemplary Occupational Education Program in a Rural Community. 1970. (ED-050-296)

35. Bailey, Larry J. A Curriculum Model for Facilitating Career Development. March 1971. (ED-060-198)

36. Tuckman, Bruce W. An Age-Graded Model for Career Development Education. Trenton, New Jersey: Research Coordinating Unit, Division of Vocational Education, New Jersey State Department of Education; December 1971. (ED-060-180)

37. Holstein, Herbert B. Career Education: A Curriculum Model and Strategies for Implementation. November 1971. (ED-059-365)

38. Career Education in Arizona. 34-page booklet outlining the concept and its implementation in Arizona, May 1972. (ED-063-470)

39. A Plan for Career Development in the Public Schools of the District of Columbia. Washington, D.C.: Department of Career Development Programs, Public Schools of the District of Columbia; May 1969. (ED-059-346)

40. Career Education Resource Guide. 1972. (Available from Career Programs Department, General Learning Corporation, Morristown, New Jersey 07960; price $4.25.)

41. Keller, Louise J. Career Education In-Service Training Guide. 1972. (Available from Career Programs Department, General Learning Corporation, Morristown, New Jersey 07960; price one dollar.)

42. Gibson, Robert L. Career Development in the Elementary School. Columbus, Ohio: Charles E. Merrill Publishing Company, 1972. (Price: $1.95.)

43. Bailey, Larry J. Facilitating Career Development: An Annotated Bibliography. Springfield, Illinois: Division of Vocational and Technical Education, Illinois State Board of Vocational Education and Rehabilitation; July 1970. (ED-042-217)

44. Oregon State University. Bibliography of CORE (Careers Oriented Relevant Education); Related Projects and Materials. 1970. (ED-057-254/VT-012-824)

45. *Abstracts of Instructional Materials In Vocational and Technical Education*; *Volume 5*, *Number 3*. (More than fifty items of instructional materials for use in career education programs in elementary and secondary schools are listed in the subject index under the headings of "Career Education," "Occupational Exploration," and "Occupational Information.") Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; 1972. (ED-065-668)

46. Taylor, Robert E. *Perspectives on Career Education*. March 1972. (ED-064-479)

47. Swanson, Gordon I. *Career Education*. September 1971. (ED-064-480)

48. Osipow, S.H. *Implications for Career Education of Research and Theory on Career Development*. 1972. (ED-064-498)

49. Reinhart, Bruce. *Nature and Characteristics of Emerging Career Education Curriculum*. 1972. (ED-064-498)

50. Miller, A.J. *The Emerging School-Based Comprehensive Career Education Model*. 1972. (ED-064-498)

51. Keller, Louise J. *Personnel Development For Career Education*. 1972. (ED-064-498)

52. Goldhammer, Keith. *Roles of Schools and Colleges of Education in Career Education*. 1972. (ED-064-498)

53. Smith, G. *Problems in the Organization and Administration of Career Education Programs*. 1972. (ED-064-498)

54. Moore, W. *Administrative Needs and Problems in the Installation of Career Education Programs*. 1972. (ED-064-498)

55. Kosuth, Joan and Jerry Miltenberger. *Teaching for Career Decision-Making*. 1972. (ED-063-547)

56. Howard County Board of Education, Maryland. *Career Development Resource Guide*; *K-5*. 1971. (ED-064-494)

57. Howard County Board of Education, Maryland. *Career Development Resource Guide*; *Grades 6-8*: *It's Time To Plan*. 1971. (ED-064-493)

58. CAPES: A Guideline for Career Awareness Programs for the Elementary School. Olympia, Washington: Coordinating Council for Occupational Education, State of Washington; February 1972.

59. Ohio's Career Continuum Program; World of Work Program; Grades K-6; Curriculum Guide. Columbus, Ohio: Division of Vocational Education, State Department of Education; 1972. (ED-062-565)

60. Ohio's Career Continuum Program: Career Orientation Program; Grades 7-8; Curriculum Guide. Columbus, Ohio: Division of Vocational Education, State Department of Education; 1972. (ED-064-515)

61. K-12 Career Education Guide. Sheboygan, Wisconsin: Lakeshore Technical Institute; 1971. (ED-061-429)

SECTION II
JOURNAL ARTICLES

1. Perrone, Phillip A. "Vocational Development." Review of Educational Research, April 1966, Volume 36, Number 2, pp. 298-307.
2. Tennyson, W.W. "Career Development." Review of Educational Research, October 1968, Volume 38, Number 4, pp. 346-366.
3. Holland, John L. and Douglas R. Whitney. "Career Development." Review of Educational Research, April 1969, Volume 39, Number 2, pp. 227-237.
4. American Vocational Association. "Career Development: K-14." American Vocational Journal, December 1969, Volume 44, Number 9 (entire issue).
5. Smith, Howard. "Now It Pays To Talk About Tomorrow's Jobs." Industrial Arts and Vocational Education Magazine, February 1971, Volume 60, Number 2, pp. 20-22.
6. Dreves, Fred. "An Episode is Fun Learning." Industrial Arts and Vocational Education Magazine, February 1971, Volume 60, Number 2, pp. 24-26.
7. Bottoms, Gene and George L. O'Kelley. "Vocational Education as a Developmental Process." American Vocational Journal, March 1971, Volume 46, Number 3, pp. 21-24.
8. Tennyson, W.W. "Career Development: Who's Responsible?" American Vocational Journal, March 1971, Volume 46, Number 3, pp. 54-58.
9. Elliot, Ian. "Occupational Orientation Means Work For You." Grade Teacher, April 1971, Volume 88, Number 8, pp. 60-65.
10. Hardwick, Arthur Lee. "Career Education: A Model for Implementation." Business Education Forum, May 1971, Volume 25, Number 8, pp. 3-5.
11. Murphy, Mary Kay. "Career Education--A New Job for the Schools." Scholastic Teacher; Junior/Senior High Teacher's Edition, December 1971, pp. 4-7.
12. "Career Education: Equipping Students for the World of Work." Nation's Schools, December 1971, Volume 88, Number 6, pp. 35-49.
13. Burkett, Lowell A. "AVA Formulates Position on Career Education." American Vocational Journal, January 1972, Volume 47, Number 1, pp. 9-14.

14. Peterson, Marla. "OCCUPACS for Hands-on Learning." American Vocational Journal, January 1972, Volume 47, Number 1, pp. 40-41.

15. Campbell, Robert E. "A Procedural Model for Upgrading Career Guidance Programs." American Vocational Journal, January 1972, Volume 47, Number 1, pp. 101-103.

16. Kirkpatrick, Jerry D. "Tailor-Made Programs for Small Schools." American Vocational Journal, January 1972, Volume 47, Number 1, p. 35.

17. Marland, Sidney P., Jr. "Career Education: 300 Days Later." American Vocational Journal, February 1972, Volume 47, Number 2, pp. 14-17.

18. Wykle, James H. "Career Education: Facts and Expectations." American Vocational Journal, February 1972, Volume 47, Number 2, pp. 50-56.

19. Kerlan, Julius H. and Charles W. Ryan. "New Interpretations of Guidance Role." American Vocational Journal, February 1972, Volume 47, Number 2, pp. 77-80.

20. American Vocational Association, House of Delegates. "AVA Policy Resolution on Education for Careers." American Vocational Journal, February 1972, Volume 47, Number 2, pp. 110-111.

21. Marsh, W.E. "Training Nuclear Engineering Technicians." Industrial Arts and Vocational Education Magazine, February 1972, Volume 61, Number 2, pp. 59-60.

22. Lutton, D.A. "Should Schools Buy Technician's Work Experience?" Industrial Arts and Vocational Education Magazine, February 1972, Volume 61, Number 2, pp. 61-62.

23. Jelden, D.L. "Learning Activity Packets for Individualized Instruction." Man-Society-Technology, February 1972, Volume 31, Number 5, pp. 138-140.

24. Ditlow, G. and J.R. Steinmetz. "Career Labs for Middle School Industrial Arts." Industrial Arts and Vocational Education Magazine, March 1972, Volume 61, Number 3, pp. 22-25.

25. Gallington, Ralph O. "Cooperative Vocational Education Space Needs." Industrial Arts and Vocational Education Magazine, March 1967, Volume 56, Number 3, pp. 47-49.

26. Worthington, Robert M. "Why Career Education?" School Shop Magazine, March 1972, Volume XXXI, Number 7, pp. 37-39.

27. American Vocational Association. "Career Education: A Realistic Appraisal of This Promising Concept; Examples of Ongoing Programs." American Vocational Journal, March 1972, Volume 47, Number 3 (entire issue).

28. Feirer, John L. "Should I Be An Engineer or A Toolmaker?" Industrial Arts and Vocational Education Magazine, March 1972, Volume 61, Number 3, p. 21.

29. Swalec, John J. "When You Call Your Consultant Board Together." Industrial Arts and Vocational Education Magazine, March 1972, Volume 61, Number 3, pp. 102-105.

30. Wirth, Arthur G. "John Dewey vs. The Social Efficiency Philosophers." Man-Society-Technology, March 1972, Volume 31, Number 6, pp. 170-172.

31. Dobrovolny, Jerry S. "Let's Get On With Career Education." Industrial Arts and Vocational Education Magazine, April 1972, Volume 61, Number 4, pp. 74-75.

32. Sherck, C.P. "Impact of the St. Louis Advisory Committees: Committee Members Demonstrate That Involved Citizens Can Intervene To Make Learning More Meaningful to Vocational Students." American Vocational Journal, April 1972, Volume 47, Number 4, pp. 33-35.

33. Briscoe, J.C. and William Plutte. "Bio-Med: Applied Interdisciplinary Techniques." (Career education program for high school students combining English, mathematics, science, and bio-med laboratory.) American Vocational Journal, April 1972, Volume 47, Number 4, pp. 44-45.

34. Jones, Dolores. "Coordinated Occupational Communications; An Experiment in Kansas Vocational Schools: Kansas Recognizes That The Traditional Separation of English and Vocational Education Departments Shortchanges Many of Today's Students." American Vocational Journal, April 1972, Volume 47, Number 4, pp. 46-48.

35. Ginzberg, Eli. "A Critical Look at Career Guidance." American Vocational Journal, April 1972, Volume 47, Number 4, pp. 51-54.

36. "Houston Vocational Guidance Project." American Vocational Journal, April 1972, Volume 47, Number 4, pp. 54-57.

37. Good, J.E. and Mary G. Good. "Industrial Arts Involvement in Career Education." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 205-208.

38. Maley, Donald. "Relationship of Industrial Arts to Occupational Orientation." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 209-213.

39. McLeod, Pat. "Career Education." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 214-217.

40. Boyd, Gardner. "Industrial Arts and Career Guidance in the Elementary School." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 218-219.

41. Holden, H.D. "Career Education: An Approach." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 220-221.

42. Brown, B.W. "Industrial Arts Teacher Preparation and Planned-for Career Guidance." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 222-224.

43. Siegel, Herbert. "Career Education Through Industrial Arts." Man-Society-Technology, April 1972, Volume 31, Number 7, pp. 225-228.

44. Elias, J.E. and R.A. McCue. "Utilizing Community Resources in Distributive Education." American Vocational Journal, May 1972, Volume 47, Number 5, pp. 24-26.

45. Hill, E.J. "Kentucky Pacesetters For Health Careers Education: Inter-agency Cooperation, Community College Support, A Successful Career Education Component; You'll Find All Three in This Brief History of Two High School Pilot Programs." American Vocational Journal, May 1972, Volume 47, Number 5, pp. 32-33.

46. Steeb, Ralph V. "The Role of Industrial Arts in Career Education." Man-Society-Technology, May 1972, Volume 31, Number 8, pp. 260-265.

47. Resnick, H.S. and Renzo A. Ricciuti. "The Role of Industrial Arts in Career Education." School Shop Magazine, June 1972, Volume XXXI, Number 10, pp. 17-18.

48. "Career Education Now: The Past 480 Days." School Shop Magazine, June 1972, Volume XXXI, Number 10, p. 19.

49. Magisos, Joel H. "Planning Information; Authentic and Available: How To Negotiate the ERIC System." American Vocational Journal, September 1972, Volume 47, Number 6, pp. 29-31.

50. Laramore, Darryl. "Career Education Concept Filters Down." American Vocational Journal, September 1972, Volume 47, Number 6, pp. 45-47.

51. Martin, Ross D. "Careers for the 70's in the Graphic Arts." Industrial Education Magazine, September 1972, Volume 61, Number 6, pp. 10-12.

52. Daly, C.B. "Strange Things Happened On The Way To Learning: This Career Unit Relates School Subjects To Work." Industrial Education Magazine, September 1972, Volume 61, Number 6, pp. 21-22.

53. Shimberg, Benjamin. "Stop the Band Wagon -- I Want to Get Off." American Vocational Journal, October 1972, Volume 47, Number 7, pp. 47-49.

54. "Careers For The 70's in Hot Metals." Industrial Education Magazine, October 1972, Volume 61, Number 7, pp. 16-19.

55. Feirer, J.L. "What You Can Do For Career Education." Industrial Education Magazine, October 1972, Volume 61, Number 7, p. 27.

SECTION III
BACKGROUND REFERENCES RELATED TO CAREER EDUCATION

A. *Pilot Projects, Curriculum Guides, Teaching Materials, and Instructional Programs*:

1. Carlson, Clayton D. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0159. Watertown, South Dakota: Watertown Independent School District; September 1971. (ED-060-179)

2. English, Joseph L. *Annual Interim Report From Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0013. Milford, Delaware: Milford School District; September 1971. (ED-058-420)

3. Holstein, Herbert B. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0170. (Includes resource bibliographies and sample instructional materials.) Hamlin, West Virginia: Lincoln County Schools; December 1971. (ED-059-387, ED-059-388, ED-059-389, ED-059-390, and ED-059-391)

4. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0006. (Includes sample curriculum materials.) Lancaster, South Carolina: Region V Educational Services Center; June 1971. (ED-058-408)

5. Selland, Larry. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0047. Bismarck, North Dakota: North Dakota State Board for Vocational Education; June 1971. (ED-063-517/VT-014-631)

6. Hugueley, James E. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0015. Memphis, Tennessee: Memphis City Schools; August 1971. (ED-063-517/ VT-014-388 and VT-014-389)

7. Jenkins, John D. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0059. Richmond, Kentucky: Eastern Kentucky University; October 1971. (ED-061-419)

8. McMinn, James H. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0067. Jackson, Mississippi: Mississippi State Board for Vocational Education; July 1971. (ED-059-395)

9. Rochow, Robert J. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0122. (Includes sample curriculum materials.) Pontiac, Michigan: School District of the City of Pontiac; June 1971. (ED-058-413)

10. Ploughman, T.L. *Project: Pontiac Vocational Career Development Program; Evaluation Report*. July 1971. (ED-053-331)

11. Winters, Earl E. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0070. Council Bluffs, Iowa: Pottawattamie County Board of Education; October 1971. (ED-063-517/VT-014-425)

12. Lyle, B.R. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0032. Little Rock, Arkansas: Arkansas State Department of Education; June 1971. (ED-063-458)

13. McCaleb, Omer. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0055. Portland, Oregon: David Douglas Public Schools; July 1971. (ED-058-418)

14. Young, William G. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0125. New Orleans, Louisiana: New Orleans Public Schools; July 1971. (ED-059-362)

15. Korizek, William A. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 1-361-0169. (Includes sample instructional materials.) Helena, Montana: Helena Public Schools; October 1971. (ED-060-187)

16. Caldwell, H.L. *Annual Interim Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0168. Seattle, Washington: Seattle Public Schools; December 1971. (ED-061-421)

17. Zicherman, Joan G. *Interim Evaluation Report from Exemplary Project in Career Education Sponsored Under Part D of the Vocational Education Amendments of 1968*. Project No. 0-361-0133. Raleigh, North Carolina: Center for Occupational Education, North Carolina State University; April 1971. (ED-058-974)

18. Peters, Paul N. *The Development and Demonstration of a Functional Model System of Occupational Education in Wyoming Public Education*; *K-14*. Quarterly Report from Vocational Exemplary Project No. 0-361-0023. March 1971. (ED-060-223/VT-012-949)

19. DePetro, Henry. *Operation Bridge*: *An Innovative, Comprehensive Vocational Education Program for Disadvantaged Youth*; *First Interim Report*. February 1972. (ED-062-549)

20. Mietus, Walter S. *The Maryland Career Development Project*: *First Annual Interim Report*, *Phase I and Appendix*. August 1971. (ED-057-251)

21. Laws, Lee. *Elementary Guide for Career Development*; *Grades 1-6*. Austin, Texas: Region XIII Educational Service Center, 6504 Tracor Lane; 1970.

22. Dunn, C.J. and Bill F. Payne. *World of Work*: *Occupational-Vocational Guidance in the Elementary Grades*; *A Handbook for Teachers and Counselors*. Dallas, Texas: Leslie Press, 1971.

23. Wernick, Walter. *For Those Developing World of Work Resource Units for Elementary School Teachers*. Springfield, Illinois: Division of Vocational and Technical Education, Illinois State Board of Vocational Education and Rehabilitation; September 1971. (ED-062-519)

24. Wilson, John M. *The Development of Vocational Appreciation in the Elementary School*. April 1969. (ED-054-390/VT-011-230)

25. Todd, Ronald D. *A Prospectus for the Development of a Career Development and Technology Program for Elementary School Children*. 1968. (ED-053-311)

26. Faust, Helen F. Room to Grow; Career Guidance in Elementary School. 1968. (Available from: Division of Pupil Personnel and Counseling, School District of Philadelphia; Philadelphia, Pennsylvania) (ED-035-003)

27. Platt, Allen H. Room to Grow; Something Special for All Kids. 1969. (ED-033-403)

28. New Jersey State Department of Education. The World of Work; Increasing the Vocational Awareness of Elementary School Children: A Guidebook for Teachers and Guidance Counselors. July 1969. (ED-038-511)

29. Wyoming State Department of Education. Elementary Public School Teacher Guide For Career and Attitude Development: Grade Kit K-6. (ED-062-563/VT-013-903)

30. Washington State Board for Vocational Education. Materials Prepared by Participants in EPDA Vocational Awareness Institute; Summer 1970. Elementary school level. (ED-053-286)

31. Louisiana State Department of Education. Elementary School Industrial Arts Interaction; Technology for Children: A Positive Approach to Education For A Changing Society. 1972. (ED-061-444)

32. Mitchell, Donald L. A Study of Attitudes, Interests, and Current Practices Related to Career Orientation Activities in the Elementary Schools in Oklahoma. May 1972. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Price $10.00.)

33. Hoots, William R., Jr. Industrial Arts in the Elementary School: Education For a Changing Society. 1971. (ED-059-373)

34. American Council for Elementary School Industrial Arts. Books: An Annotated Bibliography With Special Reference to Industrial Arts Activities in Elementary Grades. 1971. (Available from American Industrial Arts Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036; Stock No. 641-21338; price two dollars.) (ED-057-236)

35. Oregon State Department of Education. Introducing Children to the World of Work; An Annotated Bibliography of Non-Fiction Materials. (ED-052-377)

36. Miller, W.R. and E.K. Blankenbaker. Annotated Bibliography of Publications and Reports of Research Dealing with the Interpretation of the "World of Work" to Elementary Children. 1970. (ED-057-254/VT-011-856)

37. Minnesota Environmental Sciences Foundation. Exemplary Vocational Education Program Based on Environmental Studies, K-14. Report of one-week inservice program for elementary teachers who are currently field testing career education materials in grades K-6; December 1971. (ED-063-517/VT-014-504)

38. Peterson, Marla. The OCCUPAC Project; A Project to Develop Occupational Information Learning Activity Packages for Grades K-9. June 1971. (ED-055-225)

39. ERIC Clearinghouse on Counseling and Personnel Services, "Orientation Approaches to Increase Student Awareness of Occupational Options." November 1969. (ED-033-255)

40. Petersen, M.L. A Comparison and Cost Analysis of Two Approaches to the Provision of Occupational Information. 1971. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 72-10,561, Price $10.00.)

41. MacDonald, Randolph. A Comparison of Two Methods of Presenting Occupational Information. March 1972. (ED-062-574)

42. Sturges, Jack C. A Comparison of Two Methods of Providing Information to Ninth Grade Students About the World of Work. August 1969. (ED-044-722)

43. Shirts, R.G. Career Simulation For Sixth Grade Pupils. 1966. (ED-010-076)

44. Shirts, R.G. Life Career Game; Player's Manual. 1966. (ED-010-077)

45. Barbula, P.M. and Stephen W. Isaac. Career Simulation For Adolescent Pupils; Final Report. November 1967. (ED-016-268)

46. Abington School District, Pennsylvania. Career Development Activities: Grades 5,6, and 7. 1968. (ED-022-219)

47. Pharr-San Juan-Alamo Independent School District, Texas. A Guide for Occupational Orientation: The World of Work; Grades 5-7. 1971. (ED-063-473)

48. American Institutes for Research. The "Project ABLE" Student Vocational Plan (Grades 7,8, and 9). (ED-030-720)

49. Ford Foundation. Occupational Awareness in the Urban Middle School: Compendia on Two Vocational Guidance Institutes. 1971. (ED-060-481)

50. Needham, Raymond. Improving Occupational Orientation Programs for Junior High School Students in Metropolitan Areas. June 1971. (ED-055-242)

51. Curry, John F. and Robert L. Brooks. A Comparison of Two Methods of Teaching Life Career Planning to Junior High School Students. September 1971. (ED-059-401)

52. Darcy, Robert L. An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes. June 1968. (ED-022-056)

53. Blair, Margaret. A Regional Institute to Aid Improvement of Instructional Practices, Materials, and Student Experiences For Coordinators and Instructors of Vocational Orientation Programs; Final Report. Introduction to Vocations (I.V.) Program. January 1968. (ED-019-507)

54. Clary, J.R. Attitudes of Public School Personnel Toward the Introduction to Vocations Program in North Carolina. 1967. (ED-011-548)

55. Tosh, D.J. Effects of An Introduction to Vocations Course on the Vocational Development of Ninth Grade Students. 1971. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 72-9313, Price $10.00.)

56. Arkansas State Department of Education. Arkansas Guidebook for Vocational Orientation. September 1971. (ED-061-433)

57. A Guide for Teachers of A Course in Career Exploration; Grades 8-9-10. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education; 1970. (ED-049-356)

58. Cincinnati Public Schools. Man: His Life and Work; A Career Orientation Manual for Teachers of Seventh and Eighth Grade Social Studies. September 1970. (ED-050-005)

59. Maley, Donald. Relationship of Industrial Arts to Occupational Orientation. December 1971. (ED-064-470)

60. Naroff, Arnold. A Programmed Occupational and Educational Guidance Information Unit in Industrial Arts Metalworking: The Development of a Programed Unit of Instruction in Occupational Information and Educational Guidance for Ninth and Tenth Grade Students in Industrial Arts Metalworking Classes in the Public Secondary Schools of the City of New York. 1971. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 71-28,587, Price $10.00.)

61. Miller, Dudley B. A Critical Analysis of the Vocational Guidance Practices Employed by Industrial Arts Teachers in Selected Junior High Schools in the United States. March 1965. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 65-9817, Price $10.00.)

62. Jackson, James S. Evaluation of the Career Development Laboratory at Sayre Junior High School in Philadelphia. October 1969. (ED-035-942)

63. Weissman, Sheldon. Pre-Vocation Program. Pre-vocational program for junior high students, emphasizing a career development theme and work experience. September 1970. (ED-062-579/VT-012-163)

64. DeBlassie, Richard R. and William P. Jones. Prevocational Orientation in Vocational Education for Junior High School Students in New Mexico. 1967. (ED-027-441/VT-004-608)

65. Mississippi State University, Curriculum Coordinating Unit. Occupational Orientation: An Introduction to the World of Work: Teacher's Handbook; Preliminary Draft. August 1969. (ED-050-279)

66. Lee, J.S. Occupational Orientation: An Introduction to the World of Work; Study Guide. 1971. (ED-057-235)

67. Worcester Public Schools, Massachusetts. A Guidance and Curriculum Guide For Junior High School Grade Nine General Occupations Program. 1966. (ED-053-339/VT-012-378)

68. Alabama State Department of Education. Course Outline for Introduction to the World of Work (Seventh Grade). 1970. (ED-056-238/VT-012-680)

69. Alabama State Department of Education. Course Outline for Exploring the World of Work (Eighth Grade). 1970. (ED-056-238/VT-012-681)

70. Alabama State Department of Education. Course Outline for Vocational Orientation (Ninth Grade). 1969. (ED-056-238/VT-012-682)

71. Texas Tech University. Orientation To The World of Work; Part One and Part Two. 1971. (ED-053-339/VT-012-656 and VT-012-657)

72. Mason City Community Schools, Iowa. Course of Study For Education and Vocational Planning. Junior high level. 1967. (ED-059-407/VT-013-538)

73. Wyoming State Department of Education. Career Orientation: "Mini" Unit. Junior high school level. (ED-059-407/VT-013-580)

74. Albracht, J. Using Existing Vocational Programs for Providing Exploratory Experiences. August 1968. (ED-027-432)

75. Daane, C.J. Vocational Exploration Group (VEG): Theory and Research. 1971. (ED-062-664)

76. Krumboltz, John D. Vocational Problem-Solving Experiences for Stimulating Career Exploration and Interest. August 1967. (ED-015-517)

77. Krumboltz, John D. Vocational Problem-Solving Experiences for Stimulating Career Exploration and Interest; Phase II; Final Report. August 1968. (ED-029-101)

78. Exploring in Aerospace Rocketry: An Introduction to the Fundamentals of Rocketry. 1971. (ED-058-455)

79. Exploring in Aeronautics: An Introduction to Aeronautical Sciences. 1971. (ED-058-456)

80. Lux, Donald G., Willis E. Ray, and James J. Buffer. A Junior High School Industrial Technology Curriculum Project: A Final Evaluation of the Industrial Arts Curriculum Project (IACP), 1965-1971; World of Construction and World of Manufacturing. Columbus, Ohio: Ohio State University Research Foundation; August 31, 1971. (ED-054-389)

81. The World of Construction; Industrial Arts Curriculum Project: Textbook, Laboratory Manuals, and Teacher's Guide. Columbus, Ohio: Ohio State University Research Foundation; 1970. (ED-058-397, ED-058-398, ED-058-399, and ED-058-400)

82. The World of Manufacturing; Industrial Arts Curriculum Project: Textbook, Laboratory Manual, and Teacher's Guide. Columbus, Ohio: Ohio State University Research Foundation; 1971. (ED-058-396, ED-058-395, and ED-058-394)

83. Fleming, Blanche M. Introduction to Work-Careers Curriculum For Junior High School Students, For Period June 1968 to June 1969. (ED-060-223/VT-013-224)

84. North Carolina Committee on Occupational Exploration in the Public Schools. Exploring the World of Work; Grades 6-9. April 1969. (ED-057-254/VT-012-516)

85. Budke, Wesley E. Review and Synthesis of Information on Occupational Exploration. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; June 1971. (ED-056-165)

86. Delaware State Department of Public Instruction. Exploring Occupations: Guidelines for Implementation of Programs of Occupational Exploration and Awareness in Delaware Schools Under H.B. 509. December 1970. (ED-057-234)

87. Florida State Department of Education. Orientation to the World of Work: A Suggested Guide. March 1969. (ED-053-339/VT-012-229)

88. Knox County Department of Public Instruction, Tennessee. Hands On: A Comprehensive Program of Career Orientation for High School Students. 1971. (ED-064-501)

89. Cincinnati Public Schools. An Analysis of the Career Orientation Project in Social Studies. 1971. (ED-056-938)

90. Oregon State Department of Education. Teacher's Guide To: Self-Understanding Through Occupational Exploration (SUTOE). 1968. (ED-024-965)

91. Parnell, Dale. Teachers Guide to SUTOE; Self Understanding Through Occupational Exploration. June 1969. (ED-034-227)

92. Abstracts and/or Titles of Research and Development Projects Dealing With "Orientation To Work" and Career Development. July 1970. (Available from Minnesota Research Coordinating Unit, 145 Peik Hall, University of Minnesota, Minneapolis, Minnesota 55455.)

93. Flug, Eugene R. and Orville Nelson. The Establishment of American Industry As A Transitional Subject Between General and Vocational Education; Final Report and Appendixes. Contract No. OE-5-85-060. Menomonie, Wisconsin: Stout State University; July 1971. (ED-064-483)

94. Baugh, Douglas S. and William E. Martin. Total Career Capability for All; A Career Development Program Model. 1970. (ED-044-719)

95. Warren, R. and Dan Stevens. Developing a Program of Occupational Education for All. January 1968. (ED-033-237/VT-005-517)

96. Doty, Charles R. An Assessment of P.A.C., Plan-A-Career. July 1971. (ED-063-517/VT-014-749)

97. Utah State University. Proposal For a Mobile Assisted Career Exploration Unit. 1968. (ED-042-179)

98. University of Minnesota, College of Education. Suggested Teaching-Learning Approaches for Career Development in the Curriculum. 1968. (ED-053-289)

99. Ohio State Department of Education. Workshop in Developing Guidelines for Planning Career Development Programs K-12 in Ohio. June 1971. (ED-052-477)

100. Papers Presented at the Workshop on the Development of Guidelines for Planning Career Development Programs K-12 in Ohio. Columbus, Ohio: Ohio State Department of Education; June 1971. (ED-053-313)

101. Leonard, George E. The Developmental Career Guidance Project: An Interim Report. December 1968. (ED-035-031)

102. Bush, Donald O. *Between Education and the World of Work: The Image of the World of Work*. February 1969. (ED-032-582)

103. Bush, Donald O. *The World of Working and Learning*. June 1969. (ED-034-881)

104. *Occupational Education Programs; Image of the World of Work; Volumes I, II, and III: Teacher Orientation Activities, Instruments and Evaluation, Lesson Plans, Resource File*. August 1969. (ED-034-880, ED-034-884, and ED-034-885)

105. Horyna, Larry L. *Working, Learning, and Career Planning: A Cooperative Approach to Human Resource Development*. August 1969. (ED-034-874)

106. *Model Cities Survey: A Comprehensive Program of Occupational Exploration and Vocational Education; A Conceptual Plan*. June 1968. (ED-042-000)

107. Case Western Reserve University, Department of Education. *A Working Curriculum Paper on Technology and the World of Work and Careers*. 1970. (ED-052-359)

108. Agan, Raymond J. *The Development and Demonstration of a Coordinated and Integrated Program of Occupational Information, Selection, and Preparation in A Secondary School*. June 1968. (ED-022-961 and ED-022-962)

109. Digneo, Ellen H. *Career Selection Education Program, 1965-1968*. New Mexico Western States Small Schools Project. August 1968. (ED-029-725)

110. Minelli, Ernest L. *The Partnership Vocational Education Project: A New Program in Industrial-Technical Education*. 1965. (ED-012-313)

111. Central Michigan University. *A Series of Horizontally Articulated Problems on Electricity and Electronics Presented to the Partnership High Schools: Correlated Problems Approach to Integrated Knowledge*. Correlates English, industrial education, mathematics, and science into a flexible one-semester course. 1967. (ED-053-339/VT-012-023)

112. Central Michigan University. *A Series of Horizontally Articulated Problems on Metal Technology Presented to the Partnership High Schools: Correlated Problems Approach to Integrated Knowledge*. 1967. (ED-053-339/VT-012-024)

113. Central Michigan University. *A Series of Horizontally Articulated Problems on Power and Energy Presented to the Partnership High Schools: Correlated Problems Approach to Integrated Knowledge*. 1967. (ED-053-339/VT-012-036)

114. Central Michigan University. *A Series of Horizontally Articulated Problems on Wood Technology Presented to the Partnership High Schools: Correlated Problems Approach to Integrated Knowledge*. 1967. (ED-053-339/VT-012-037)

115. Central Michigan University. *Pertinent Impressions: The Partnership Vocational Education Project; 1965-1966*. (ED-054-390/VT-012-021)

116. Hackensack Public Schools. *Industrial Prep: Three-Year Comprehensive Interdisciplinary Program For Senior High School Students; Volumes One Through Five*. Involves English, Social Studies, Mathematics, Biology, Physics, Chemistry, Architecture, Guidance, and Occupational Relations. (ED-063-463, ED-063-464, ED-063-465, ED-063-466, and ED-063-467)

117. Hawaii State Department of Education. *Pre-Industrial Preparation Program Handbook: Vocational-Technical Education*. Correlates specific occupational experiences with verbal, scientific, and mathematical skills. May 1972. (ED-064-497)

118. Barlow, Melvin L. *A New Source of Manpower: Report on the U.C.L.A. Secondary School Allied Health Project*. (ED-063-476)

119. Majchrzak, Shirley. *The Secondary School Project for an Introduction to the Allied Health Professions*. October 1970. (ED-064-475)

120. Fielstra, Clarence and Barbara Rosenquist. *Evaluative Study Design: Phase I of the Secondary Schools Project for an Introduction to the Allied Health Professions*. February 1971. (ED-064-474)

121. Kunzman, Leonard E. *Career Education in Oregon*. August 1970. (ED-051-432/VT-011-799)

122. Oregon State Board of Education. 1970 Summer Institute on Career Education. June 1970. (ED-063-517/VT-014-712)

123. Hoots, William R. Occupational Education: A Program of Career Guidance and Occupational Education. June 1969. (ED-053-339/VT-012-365)

124. Hopson, Barrie. The Effectiveness of a Careers Course in a Secondary School. January 1970. (ED-063-517/VT-014-211)

125. Warren City Schools, Ohio. Pre-Vocational Curriculum Guide, Grade 10. 1970. (ED-062-563/VT-013-817)

126. Rochester City Schools, New York. A Curriculum Guide for Introduction To Aerospace and Air Transportation Occupations: Occupational Education For High School Students. 1971. (ED-062-563/VT-013-911)

127. Rochester City Schools, New York. A Curriculum Guide for Airline Occupations: Occupational Education for High School Students. 1971. (ED-062-563/VT-013-918)

128. Pointer, Leah J. The World of Work: A Curriculum Guide for Grades One Through Twelve. (ED-059-368)

129. Olson, LeVene A. Career Development Components in Vocational Education: A Diagrammatic Model K-12. (ED-064-509)

130. Olson, LeVene A. Career Awareness Education: Introduction, Instructional Resource Units, and Annotated Bibliography. (ED-064-510)

131. Olson, LeVene A. Career Exploration: Instructional Materials, Evaluative Results and Innovative Programs. (ED-064-511)

132. Flanagan, John C. Project PLAN: The Basic Role of Guidance in Individualizing Education. March 1970. (ED-038-676)

133. Dunn, James A. The 1970 PLAN Guidance Program. 1970. (ED-038-677)

134. Hamilton, Jack A. Occupational Information as an Integral Strand in the PLAN Social Studies Curriculum. March 1970. (ED-038-666)

135. Frank, Nathaniel H. Final Report of the Summer Study on Occupational, Vocational, and Technical Education. 1965. (ED-003-109 and ED-003-097)

136. Delaware Occupational Research Coordinating Unit. The Development of a Total Program of Education for the World of Work: Part I, Rationale and Proposal for Involvement of Schools. 1968. (ED-057-254/VT-007-470)

137. California State Advisory Council on Vocational Education and Technical Training. Feasibility Study of Career Ladder Curriculum and Guidance and Counseling. January 1971. (ED-057-254/VT-012-913)

138. Wayne State University. The Galaxy Plan in Industrial Education: Materials Developed in the Experienced Teacher Fellowship Program. Plans and materials for four major career clusters in grades 7 through 12. 1968. (ED-045-798)

139. Doane, Raymond C. Guidance Practices Leading To Career Orientation and Instruction For Selected Secondary School Students of Connecticut. January 1970. (ED-060-223/VT-013-578)

140. Rahmlow, Harold F. A Series of Programmed Instruction Books for Learning Occupationally Oriented Basic Mathematics. June 1968. (ED-022-928, ED-022-929, ED-022-930, ED-022-931, ED-022-932, ED-022-933, ED-022-934, ED-022-935, ED-022-936, ED-022-937, ED-022-938, ED-022-939, ED-022-940, ED-022-941, ED-022-942, ED-022-943, ED-022-944, ED-022-945, ED-022-946, ED-022-947, ED-022-948, ED-022-949, ED-022-950, ED-022-951, ED-022-952, ED-022-953, ED-022-963, ED-023-884 and ED-023-885.)

141. Houpt, Gary L. Strategies for Teaching English in Career Education. August 1971. (ED-059-404)

142. Eaddy, K.M. An Exemplary Model For A Total Ecological Approach to Non-Graded Vocational Programs in Separate Education Centers, Final Report. November 1971. (ED-060-193)

143. Call, John Reed. Diversified Satellite Occupations Program. Interim Report. (Emphasis on dropouts). June 1971. (ED-060-196)

144. A Pilot Project to Develop a Program of Occupational Training For School Alienated Youth. Connecticut: Norwalk Board of Education, August 1968. (ED-016-868, ED-025-641, and ED-025-642)

145. U. S. Office of Education. *Pre-Vocational Exploratory Programs in Manpower Development and Training*. 1970. (ED-054-334)

146. Osborn, W.C. *An Instructional Program for Employability Orientation*. February 1972. (ED-064-491)

147. Atlanta Public Schools. *A Secondary Pre-Vocational Curriculum Guide for Teachers of the Educable Mentally Retarded*. 1970. (ED-062-545)

148. Groelle, M.C. *A Pilot Project in Curriculum Development for "Work Experience" and "Occupations" Courses for Educable Mentally Retarded Students*. August 1967. (ED-023-207)

149. Nicolaysen, G.R. *Groundsman-Gardener For Special Class Students (Educable Mentally Retarded Youth); Classroom Study and Work Experience*. July 1965. (ED-010-280)

150. Nenni, Irene W. *Development of Vocational Education for the Handicapped*; *Final Report*. Huntington, West Virginia: Cabell County Board of Education; October 1971. (ED-063-517/VT-014-771)

151. Fibel, Lewis R. *Review and Synthesis of Literature on Occupational Preparation in the Community College*. 1972. (ED-061-416)

152. Barlow, Melvin L. *The Case for Vocational Education in the Junior College With an Introductory Review of Recent Research*. February 1972. (ED-057-785)

153. Millard, R.M. *The Role, Responsibility, and Function of the Community Colleges in Occupational Education*. June 1972. (ED-063-936)

154. Lillie, F.D. *Secondary Schools and Community-Junior Colleges Vocational Education Articulation*. January 1972. (ED-062-520)

155. Bender, L.W. *Occupational Education Program Articulation Between the Community College and Baccalaureate Levels*. January 1972. (ED-062-520)

156. Swift, Joan W. *Human Services Career Programs and the Community College*. 1971. (ED-052-774)

157. Korim, Andrew S. *Government Careers and the Community College*. 1971. (ED-052-775)

158. Chancellor's Office of the California Community Colleges. In-Service Education in the Public Service. 1971. (ED-062-966)

159. Office of the Chancellor, California Community Colleges. Social Services: A Suggested Associate Degree Curriculum. 1972. (ED-063-937)

160. Chan, Gordon L. The Education and Training of Marine Technicians. 1968. (ED-025-238)

161. Gordon, K.G. A Taxonomy of Marine Technicians and Technologists and the Implications for Training Them. June 1971. (Available from National Technical Information Service, Springfield, Virginia 22151; Catalog No. PB-199-665, microfiche price 95 cents.)

162. Shoreline Community College, Seattle. Skill Brochure for Employers and Technicians in Marine Biology Technology: A Two-Year Degree in Applied Marine Sciences. (ED-053-339/VT-012-188)

163. Shoreline Community College, Seattle. Skill Brochure for Employers and Technicians in Oceanography Technology: A Two-Year Degree in Applied Marine Sciences. (ED-053-339/VT-012-187)

164. A Guide for the Development of Curriculum. June 1969. (ED-037-535)

165. Writing Performance Goals; Strategy and Prototypes: A Manual for Vocational and Technical Educators. (ED-061-413)

166. Illinois State Board of Vocational Education and Rehabilitation. Workshop Handbook: Writing Measurable Objectives for Career Education. (ED-064-502)

167. Impellitteri, Joseph T. and Curtis R. Finch. Review and Synthesis of Research on Individualizing Instruction in Vocational and Technical Education. July 1971. (ED-058-389)

168. Edling, Jack V. Individualized Instruction. PREP Report No. 16. Washington, D.C.: National Center for Educational Communication, U.S. Office of Education; 1972. (ED-041-185)

169. Bjorkquist, David. What Vocational Education Teachers Should Know About Individualizing Instruction. November 1971. (ED-057-184)

170. McCracken, J.D. *Answers to Questions on Vocational Education*; *Curriculum Planning*: *Metalworking, Environmental Control, Public Services, Construction, Food Processing and Distribution, Health, and Transportation*. 1971. (ED-057-231)

171. Budke, W.E. *Answers to Questions on Vocational Education*; *Cooperative Education, Cost Effectiveness, Curriculum Development, Occupational Exploration, Placement and Follow-Up Programs for Rural Areas*. 1971. (ED-057-233)

172. Brandon, George L. *Research Visibility*; *The Vocational Education Curriculum*. March 1969. (ED-029-963)

173. Allen, Dwight W. *Flexibility for Vocational Education Through Computer Scheduling*; *Final Report*. September 1968. (ED-029-952)

174. Allen, Dwight W. and others. *Microteaching*. *PREP Report No. 17*. Washington, D.C.: National Center for Educational Communication, U.S. Office of Education; 1972. (ED-041-190)

175. ERIC Clearinghouse on Vocational and Technical Education, "Intensive Training for Job-Entry Skills: A Selected Bibliography for Use in Program Development." November 1969. (ED-034-061)

176. Rhodes, James A. *Vocational Education and Guidance: A System for the Seventies*. Columbus, Ohio: Charles E. Merrill Publishing Company, 1970.

177. Michigan State University. *Hospitality Education Curriculum Development Project*; *Final Report*. February 1970. (ED-042-053)

178. Berry, Suzanne. *Establishing a Training Program for Child Care Workers*: *A Guide for Teachers*. December 1971. (ED-058-392)

179. Erie Community College, New York. *Career Ladders in Environmental Health*. 1970. (ED-047-097 and ED-051-400)

180. National Sanitation Foundation. *Environmental Health Technology*: *Three Programs of Training and Education in Environmental Technology*. May 1970. (ED-062-579/VT-013-351)

181. National Sanitation Foundation. *Environmental Health Technology*: *Six Programs of Training and Education in Environmental Technology*. May 1970. (ED-062-579/VT-013-352)

182. National Sanitation Foundation. Environmental Information: Programs of Training and Education in Environmental Technology. May 1970. (ED-062-579/VT-013-353)

183. National Sanitation Foundation. Technician Descriptions: Programs of Training and Education in Environmental Technology. May 1970. (ED-062-579/VT-013-354)

184. Payne, Albert V. Administrative Factors and Actions in Initiating Two-Year Post High School Environmental Control Technology Programs: A Suggested Guide. January 1972. (ED-062-531)

185. Olympus Research Corporation. Career Education in the Environment: A Handbook. 1972. (Available from U.S. Government Printing Office, Washington, D.C. 20402; Stock Number 1780-0892, price three dollars.) (ED-063-471)

186. Institute for Local Self Government. Municipalities as a Model for New Careers and Redirection of Vocational-Technical Education Programs; Final Report. (ED-062-557)

187. Information Communication Occupations; A Suggested Curriculum Guide. 1970. (ED-039-365)

188. Supervisory and Administrative Management Occupations; A Suggested Curriculum Guide. 1970. (ED-039-363)

189. Cook, Fred S. Senior Year Intensified Demonstration Curriculum Program. April 1970. (ED-040-297 and ED-010-054)

190. Distributive Education in the High School; A Suggested Guide for Administrators and Teachers of Distribution and Marketing. September 1969. (ED-039-362)

191. Tennyson, W.W. and Warren G. Meyer. Pilot Training Project for Teachers of Distribution and Marketing, Focusing on Responsibilities for Career Development. December 1967. (ED-027-383)

192. Mongelugi, J. and Albert Sternberg. An Outline for a Tenth Grade Curriculum For Distributive Education. Job oriented and provides for detailed exploration of various occupations. March 1971. (ED-062-563/VT-013-506)

193. Kaba, Albert and Ralph Bregman. Introduction to Vocational Distributive Education Unit. Exploration of career opportunities in the area of distribution. March 1971. (ED-059-407/VT-013-505)

194. Lecznar, W.B. Vocational-Technical Education; New Horizons: A Symposium Presented at the Meeting of the American Personnel and Guidance Association; April 2, 1969. (ED-035-750)

195. ERIC Clearinghouse on Educational Administration, "ERIC Abstracts: A Collection of ERIC Document Resumes on Developing Vocational Education Programs in the Public Schools." March 1971. (ED-048-664)

196. New Hampshire State Department of Education. An Annotated Bibliography of Resources in the Fields of Vocational-Technical Education and Vocational Guidance. (ED-038-513)

197. Ullery, J.W. and Joseph S. Nicastro. Development and Evaluation of an Experimental Curriculum for the New Quincy Vocational-Technical School; Project ABLE: Final Report. September 1970. (ED-048-492)

198. Kaufman, Jacob J. The Preparation of Youth For Effective Occupational Utilization; The Role of the Secondary School in the Preparation of Youth For Employment. February 1967. (ED-011-060)

199. Adams, Dewey A. Review and Synthesis of Research Concerning Adult Vocational and Technical Education. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; April 1972. (ED-064-469)

B. The Cluster Concept:

1. Cunningham, J.W. The Job-Cluster Concept and Its Curricular Implications; A Symposium. 1969. (ED-042-897)

2. Cunningham, J.W. The Development of the Occupation Analysis Inventory: An "Ergometric" Approach to an Educational Problem. Raleigh, North Carolina: Center for Occupational Education, North Carolina State University; 1971. (ED-062-542)

3. Cunningham, J.W. Human Attribute Requirements of Work Elements: Further Development of the Occupation Analysis Inventory. Raleigh, North Carolina: Center for Occupational Education, North Carolina State University; 1971. (ED-062-552)

4. Riccobono, John A. and J.W. Cunningham. Work Dimensions Derived Through Systematic Job Analysis: A Study of the Occupation Analysis Inventory. 1971. (ED-062-541)

5. Riccobono, John A. and J.W. Cunningham. Work Dimensions Derived Through Systematic Job Analysis: A Replicated Study of the Occupation Analysis Inventory. 1971. (ED-062-543)

6. Cole, Nancy S. A Spatial Configuration of Occupations. March 1970. (ED-037-773)

7. Working Paper: Career Clusters--An Organizational Technique to Facilitate the Delivery of Career Education. Washington, D.C.: Division of Vocational and Technical Education, U.S. Office of Education; January 1972.

8. Vestal, Theodore M. and others. An Analysis of Fifteen Occupational Clusters Identified By The U.S. Office of Education. June 1972. (Available from DORD, Texas Education Agency, 201 East 11th Street, Austin, Texas 78701.)

9. Winters, Earl E. Occupational Clusters: Developed Through The Cooperative Efforts of the Pottawattamie County Exemplary Program in Career Education and the Council Bluffs Community School District. February 1972. (Available from The Halverson Center for Education, Route 1, Council Bluffs, Iowa 51501)

10. Burns, William E. Public Service Occupations in Career Education: Selected Excerpts and Recommendations of the National Advisory and Review Committee; Public Service Occupations Cluster Curriculum Project. January 1972. (ED-062-526)

11. Taylor, John E. An Occupational Clustering System and Curriculum Implications for the Comprehensive Career Education Model. HumRRO Technical Report No. 72-1. Alexandria, Virginia: Human Resources Research Organization; January 1972. (ED-061-427)

12. Maley, Donald A. *An Investigation and Development of the Cluster Concept as a Program in Vocational Education at the Secondary School Level*: *Construction Cluster, Electromechanical Installation and Repair Cluster, Metal Forming and Fabrication Cluster*. August 1966. (ED-010-301, ED-010-302, ED-010-303, and ED-010-304)

13. Maley, Donald. *The Preparation of Curriculum Materials and the Development of Teachers for an Experimental Application of the Cluster Concept of Vocational Education at the Secondary School Level*. August 1967. (ED-016-841, ED-016-842, ED-016-843, and ED-016-844)

14. Maley, Donald and Walter S. Mietus. *The Implementation and Further Development of Experimental Cluster Concept Programs Through Actual Field Testing and Evaluation at the Secondary School Level*. August 1968. (ED-022-965)

15. Maley, Donald. *The Implementation and Further Development of Experimental Cluster Concept Programs Through Testing and Evaluation Including Placement and Follow-Up of Subjects*. August 1969. (ED-042-041)

16. Maley, Donald. *The Cluster Concept Program as an Approach to Vocational Education at the Secondary School Level*. May 1969. (ED-054-378)

17. Kratochvil, D.W. and Lorna J. Thompson. *The Cluster Concept Program Developed by the University of Maryland*, *Industrial Education Department*. January 1972. (ED-064-526)

18. Oregon State Board of Education. *Curriculum Guide for Electricity-Electronics*. Electricity-electronics occupations cluster curriculum. September 1969. (Available from Oregon Board of Education 942 Lancaster Drive, N.E., Salem, Oregon 97310; Price $2.50.)

19. Oregon State Board of Education. *Curriculum Guide for Metals*. Metalworking occupations cluster curriculum. September 1969. (Available from Oregon Board of Education, 942 Lancaster Drive, N.E., Salem, Oregon 97310; Price $2.50.)

20. Oregon State Board of Education. *Curriculum Guide for Marketing*. Marketing occupations cluster curriculum. February 1970. (Available from Oregon Board of Education, 942 Lancaster Drive, N.E., Salem, Oregon 97310; Price $2.50.)

21. Oregon State Board of Education. Curriculum Guide for Agriculture. Agricultural occupations cluster curriculum. March 1970. (Available from Oregon Board of Education, 942 Lancaster Drive, N.E., Salem, Oregon 97310; Price $2.50.)

22. Oregon State Board of Education. Curriculum Guide for Food Service Occupations. Food service occupations cluster curriculum. May 1970. (Available from Oregon Board of Education, 942 Lancaster Drive, N.E., Salem, Oregon 97310; Price $2.50.)

23. Oregon State Board of Education. Curriculum Guide for Clerical Occupations. Clerical occupations cluster curriculum. 1971. (Available from Oregon Board of Education, 942 Lancaster Drive, N.E., Salem, Oregon 97310; Price $2.50.)

24. Allen, David. A National Study of the Aviation Mechanics Occupation; Final Report. Research and development for a common core curriculum. September 1970. (ED-044-531 and ED-010-279)

25. The UCLA Allied Health Professions Project; The Background and The Programs. Research and development for core curriculums. November 1968-April 1972. (ED-037-570, ED-025-663, ED-041-146, ED-041-147, ED-041-148, ED-041-149, ED-041-150, ED-041-151, ED-041-152, ED-041-153, ED-053-327, ED-054-355, ED-064-490, ED-064-492, ED-064-506, ED-064-507, and ED-064-508)

26. Soong, Robert K. Career Ladders and Core Curriculum in Human Services. September 1970. (ED-047-141)

27. Social Service Aide Project; Final Report. Research and development for core curriculums for the training of paraprofessionals for the human services areas. September 1971. (ED-058-438, ED-058-437, ED-058-436, ED-058-435, ED-058-433, ED-058-439, ED-058-440, ED-058-441, ED-058-442, ED-058-443, ED-058-338, ED-059-392, ED-059-393, and ED-059-394.)

28. Rahmlow, Harold F. A Survey Instrument For Identifying Clusters of Knowledge and Competencies Associated With Performance of Food Service Work. December 1966. (ED-010-660)

29. Ertel, Kenneth A. Clusters of Tasks Performed by Merchandising Employees Working in Three Standard Industrial Classifications of Retail Establishments. June 1968. (ED-023-911 and ED-010-657)

30. Perkins, Edward A. Clusters of Tasks Associated With Performance of Major Types of Office Work. January 1968. (ED-018-665 and ED-010-656)

31. Rahmlow, Harold F. A Survey and Analysis of Major Tasks and Knowledges Associated With Work in Child Care Occupations. November 1967. (ED-021-066 and ED-010-661)

32. Wallenstien, Robert J. Knowledges Commonly Useful in Twelve Allied Health Occupations. August 1968. (ED-022-958)

33. Long, Gilbert A. Clusters of Tasks Performed by Washington State Farm Operators Engaged in Seven Types of Agricultural Production: Grain, Dairy, Forestry, Livestock, Poultry, Horticulture, and General Farming. June 1968. (ED-021-067)

34. Bakamis, William A. Identification of Task and Knowledge Clusters Associated With Performance of Major Types of Building Trades Work. December 1966. (ED-010-658)

35. Mills, Boyd C. and Harold F. Rahmlow. Major Task and Knowledge Clusters Involved in Performance of Electronic Technicians' Work. December 1966. (ED-010-655)

36. Rahmlow, Harold F. and Leonard Winchell. Mathematics Clusters in Selected Areas of Vocational Education. November 1966. (ED-010-659)

37. Goldberg, Joel. The Identification of a Curriculum Core Based Upon Content Common to a Cluster of Related Electrical and Electronic Occupations. 1971. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 71-29,739, Price $10.00.)

38. Schill, William J. and Joseph P. Arnold. Curricula Content for Technical Education (Six Technologies). Cluster/core program and specific knowledge related to six technologies: electronic, electro-mechanical, electro-chemical, chemical, chemical-mechanical, and mechanical. 1965. (ED-001-172)

39. Sjorgren, Douglas. The Identification of Common Behavioral Factors as Bases For Pre-Entry Preparation of Workers for Gainful Employment. Identification of clusters in metal-working occupations and agricultural occupations. September 1967. (ED-019-471)

40. Lynn, Frank. An Investigation of the Training and Skill Requirements of Industrial Machinery Maintenance Workers. Research and development for a core curriculum. July 1967. (ED-016-832 and ED-016-794)

41. Dillon, Roy D. and James T. Horner. Occupational Commonalities: A Base for Course Construction. 1967. (ED-024-792)

42. O'Donnell, Beatrice. Descriptions of Home and Community Occupations Related to Home Economics; Descriptions of Specific Occupations Classified Into Six Clusters; Index to Areas of Work and Worker Trait Groups for Individual Occupations. January 1967. (ED-023-796)

C. Work Experience, Cooperative Education, and Job Training in Industry:

1. A Guide for Cooperative Vocational Education. September 1969. (ED-037-564)

2. Resource Manual for the Development of Cooperative Vocational Education Programs Under the Vocational Education Act of 1963, As Amended (P.L. 90-576). Washington, D.C.: Division of Vocational and Technical Education, U.S. Office of Education; July 1972.

3. Resource Manual 71 for the Development of Cooperative Vocational Education Programs Under the Vocational Education Amendments of 1968. November 1970. (ED-048-491)

4. Wallace, H.R. Review and Synthesis of Research on Cooperative Vocational Education. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; June 1970. (ED-040-274)

5. York, Edwin G. and Roy L. Butler. What State Leaders Should Know About Cooperative Vocational Education. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; July 1971. (ED-059-349)

6. Butler, Roy L. and Edwin G. York. What School Administrators Should Know About Cooperative Vocational Education. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; August 1971. (ED-057-180)

7. Butler, Roy L. and Edwin G. York. What Teacher-Coordinators Should Know About Cooperative Vocational Education. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; August 1971. (ED-059-348)

8. Wallace, Harold R. Review and Analysis of Instructional Materials for Cooperative Vocational Education. 1972. (ED-062-513)

9. White, Robert H. Abstracts of Instructional Materials for Student Use in Vocational Cooperative Education; A Compilation of Materials Abstracted by the VT-ERIC Clearinghouse. October 1969. (ED-037-582)

10. Arizona State Department of Vocational Education. Cooperative Education General Related Instructional Units. June 1970. (ED-061-435)

11. Dopp, Joan and Athyleen Nicholson. Guidelines for Cooperative Vocational Education in Community Colleges. (ED-061-440)

12. Shenker, M. Advisory Committees for Cooperative Education Programs. (ED-062-524)

13. Allen, Thomas R. Cooperative Vocational Education Coordinator's Handbook: Volume I and Volume II. 1972. (ED-063-503 and ED-063-504)

14. Dayton School System, Ohio. Counselor's Guide; Outlining Career Opportunities in Business, Industry, and Professional Services Through The High School Cooperative Work-Study Plan. (ED-053-339/VT-011-797)

15. Levendowski, Jerry. Cooperative Distributive and Office Education Programs. 1969. (ED-039-322)

16. Kingston, Carmela C. A Study of the Status and Effectiveness of Cooperative Office Education in New Jersey, 1968-69. (ED-060-182)

17. Donley, Audrey Bell. Cooperative Office Education: Its Evolution in the Secondary Schools of the United States from 1900 to 1969. May 1971. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; hard copy price $10.00.)

18. Huffman, Harry. Guidelines For Cooperative Education and Selected Materials From The 1966 National Seminar; A Manual For the Further Development of Cooperative Education. 1967. (ED-011-044)

19. Banta, Trudy W. Interpretive Study of Cooperative Efforts of Private Industry and the Schools to Provide Job-Oriented Education Programs for the Disadvantaged. April 1969. (ED-027-442)

20. Banta, Trudy W. and others. Job-Oriented Education Programs for the Disadvantaged. PREP Report No. 9. Washington, D.C.: National Center for Educational Communication, U.S. Office of Education; 1972. (ED-034-085)

21. Banta, Trudy W. Seminar on Preparing the Disadvantaged for Jobs: A Planning Handbook. PREP Report No. 10. Washington, D.C.: National Center for Educational Communication, U.S. Office of Education; 1972. (ED-034-086)

22. Cushman, Harold R. The Development and Improvement of Directed Work Experience Programs. June 1968. (ED-022-911, ED-019-494, ED-022-910, and ED-022-919)

23. ERIC Clearinghouse on Vocational and Technical Education, "Work Experience for Broadening Occupational Offerings: A Selected Bibliography for Use in Program Development." November 1969. (ED-034-062)

24. Los Angeles City Schools. A Guide to Work Experience Education and Employment Placement; A Program for Senior High Schools. 1969. (ED-042-002)

25. Boeser, Robert and others. Work Experience Program Curriculum Guide. 1970. (ED-062-313)

26. Schill, William J. Concurrent Work-Education; Programs in the 50 States, 1965-66. (ED-023-886)

27. Governor's Office of Economic Opportunity, Minnesota. The World of Work and Welcome to It. August 1970. (ED-060-421)

28. Wenig, Robert E. and William D. Wolansky. Review and Synthesis of Literature on Job Training in Industry. 1972. (ED-062-514)

29. U.S. Department of Labor. How To Train Workers on the Job. 1970. (ED-053-339/VT-012-192)

30. SUIC: Improving Opportunities Through In-Plant Training. March 1970. (Available from National Technical Information Service, Springfield, Virginia 22151; Catalog No. PB-199-515, microfiche price 95 cents.)

D. Advisory Committees and Industry-Education Cooperation:

1. The Advisory Committee and Vocational Education. September 1969. (Available from American Vocational Association, 1510 H Street, N.W., Washington, D.C. 20005; Stock No. 241069; price $1.25.)

2. Riendeau, Albert J. and James L. Hoerner. Vocational and Technical Advisory Committees; Guidance For Our Future. (ED-016-461)

3. Stephens, John F. and Loren Martin. A Project to Develop an Instructional Packet for Advisory Committees in Vocational Education To Be Used in the Orientation of School Personnel and Committee Members; Final Report. October 1971. (ED-062-567)

4. Institute for Educational Development. Partnership High Schools; The Search for New Ways to Cooperate: Industry and Education, Study No. 2. October 1969. (ED-039-273 and ED-038-534)

5. Burt, Samuel M. Strengthening Volunteer Industry Service to Public Education: A Basic Manual for School Administrators and Business Executives. September 1971. (ED-062-528)

6. An Internship Program for the Training, Exchange, and Transition of Vocational Education and Business, Industry, Agricultural, and Government Personnel: Final Report of a Pilot Study. June 1971. (ED-062-517)

E. Career Guidance and Counseling:

1. Career Guidance, Counseling, and Placement. Proceedings of the National Conference on Guidance, Counseling, and Placement in Career Development and Educational-Occupational Decision Making. October 1969. (ED-041-143)

2. Campbell, R.E. and Louise Vetter. Career Guidance: An Overview of Alternative Approaches. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; August 1971. (ED-057-183)

3. Campbell, Robert E. The Systems Approach: An Emerging Behavioral Model for Vocational Guidance; A Summary Report. January 1971. (ED-047-127)

4. National Advisory Council on Vocational Education. Counseling and Guidance: A Call for Change. June 1972. (ED-064-482)

5. Hoyt, Kenneth B. Role, Function, and Approach for Guidance in Career Development of Youth from Junior High Through Senior High. April 1969. (ED-033-386)

6. Mortimer, William E. Programs of Guidance and Counseling as They Relate to Young People and Their Preparation for Work. June 1965. (ED-054-390/VT-005-609)

7. Wolfbein, Seymour L. Occupational Information; A Career Guidance View. 1968. (ED-029-346)

8. Herr, Edwin L. and Stanley H. Cramer. Vocational Guidance and Career Development in the Schools: Toward A Systems Approach. Boston, Massachusetts: Houghton-Mifflin Company, 1972. (Price: $9.95)

9. Herr, Edwin L. Decision-Making and Vocational Development. Boston, Massachusetts: Houghton-Mifflin Company, 1970.

10. Mullen, Margaret J. A Volunteer Program in Vocational Information and Career Guidance for Secondary Schools: A Handbook. May 1968. (ED-024-809)

11. U.S. Department of Labor, Manpower Administration. Career Guidance; A Report of the Subcommittee on Career Guidance of the Committee on Specialized Personnel. June 1967. (ED-025-786)

12. Urbick, Thelma. Decision-Making: CAPS Current Resources Index. Ann Arbor, Michigan: Counseling and Personnel Services Information Center; June 1968. (ED-021-305)

13. ERIC Clearinghouse on Counseling and Personnel Services, "Matching Students and Careers: A Bibliography." June 1970. (ED-039-375)

14. Kennedy, E.G. Career Development Workshop; Topeka, Kansas; June 1-4, 1969. (ED-042-010)

15. Hoppock, Robert. The Use and Misuse of Occupational Information. 1970. (ED-037-749)

16. Campbell, Robert E. Vocational Guidance in Secondary Education: Results of A National Survey. December 1968. (ED-026-534)

17. Hansen, Lorraine S. Career Guidance Practices in School and Community. 1970. (ED-037-595)

18. Petry, Dorothy W. Vocational Students Perception of Guidance Needs; A Study Conducted in Minnesota Area Vocational-Technical Schools. 1969. (ED-036-809)

19. Minnesota State Department of Education. Guidance Programs and Their Impact on Students: A Search For Relationships Between Aspects of Guidance and Selected Personal-Social Variables. June 1968. (ED-023-141)

20. Turner, B.A. Occupational Choices of High School Seniors in the Space Age. 1964. (ED-038-499)

21. Starkey, John D. Vocational Choice and Guidance: Whose Task? 1967. (ED-039-562)

22. Hamilton, Jack A. and G. Brian Jones. Integrating and Evaluating Career Information in a Developmental Guidance Program. March 1970. (ED-039-587)

23. Morrison, Edward J. and Vivian M. Hudak. A Vocational Guidance Plan For Junior High School; Fourth Quarterly Technical Report from Project ABLE. March 1966. (ED-024-752)

24. Bottoms, James E. and F.L. Otte. Developing A Program of Student Personnel Services for Area Vocational-Technical Schools; Final Report. Volumes I and II. December 1968. (ED-027-435)

25. Miller, Carroll H. A Pilot Project For Vocational Guidance in Economically Underdeveloped Areas. Mobile guidance program in the twelve southern-most counties of Illinois. 1968. (ED-026-527)

26. Carey, E.N. The Current Status of Vocational Guidance and Career Development in Maryland. February 1971. (ED-063-517/VT-014-505)

27. Oklahoma State Department of Education. A Guide for Developmental Vocational Guidance; Grades K-12. 1968. (ED-026-532)

28. Stevenson, W.W. and B.E. Sandlin. Evaluating Career Guidance, Counseling and Placement: State Level. Identifying Areas of Concern and Determining Evidences Needed for Evaluation: Career Guidance, Counseling and Placement: State Level. December 1970. (ED-046-009)

29. New Jersey State Department of Education. Report of 1968-69 Vocational Guidance and Counseling Projects. 1968. (ED-042-031)

30. Hawaii State Department of Education. Guidance Curriculum Guide: Career Development; Intermediate Level. 1971. (ED-060-483)

31. Columbia University, Teachers College. Implications of Career Development Theory and Research for Counselor Education. June 1967. (ED-024-078)

32. Bradley, Richard W. and others. The Occupational Information and Vocational Guidance Curriculum: Implementation of Counselor and Counselor Educators Perceptions of Pre-Service Training. (ED-061-412)

33. Gorman, Robert E. A Guidance Project To Investigate Characteristics, Background, and Job Experiences of Successful and Unsuccessful Entry Workers in Three Selected Industries. September 1966. (ED-011-976)

34. North Carolina State Department of Conservation and Development. Raleigh-Durham Area Vocational Guidance Institute for Counselors of Minority Youth. March 1972. (ED-060-494)

35. Career Counseling and Follow-up Study: Spring 1971. San Francisco, California: Pacific Heights Adult School; 1971. (ED-059-461)

36. Collings, Kent J. The Second Time Around: Finding a Civilian Career in Mid-Life. 1971. (Available from The Carroll Press, 43 Squantum Street, Cranston, R.I. 02920; Price $5.75)

37. U.S. Department of Defense. Target -- Tomorrow: Second Career Planning For Military Retirees. September 1970. (ED-063-517/VT-014-090)

F. Computer-Based Guidance Systems:

1. U.S. Office of Education. Computer-Based Vocational Guidance Systems. 1969. (ED-034-408)

2. Baruch, Rhoda. Computer-Assisted Systems in Guidance and Education: Report of an Invitational Conference on the Implications for the Practice and Education of Counselors. October 1969. (ED-040-598)

3. Willowbrook High School, Illinois. Report of Sixth Vocational Guidance Systems Conference, December 19-20, 1969. Conference on development and implications of computer-based guidance systems. (ED-057-254/VT-012-114)

4. Cogswell, J.F. Exploratory Study of Information-Processing Procedures and Computer-Based Technology in Vocational Counseling. October 1967. (ED-017-710)

5. Hallworth, H.J. A Computer Assisted Vocational Counseling System. March 1970. (ED-038-686)

6. Bohn, Martin J. The Educational and Career Exploration System: Field Trial and Evaluation. March 1970. (ED-038-661)

7. Myers, Roger A. Preliminary Report: Assessment of the First Year of Use of the Educational and Career Exploration System in Secondary Schools of Genesee County, Michigan. September 1971. (ED-060-482)

8. Jones, G.B. Development and Evaluation of a Comprehensive Career Guidance System; Final Report. January 1971. (ED-055-310)

9. Tiedeman, David V. *The Organization and Intention of a Proposed Data and Educational System For Vocational Decision-Making (ISVD)*. December 1965. (ED-062-656)

10. Durstine, R.M. *Suggestions for Treatment of Information About Occupations (ISVD)*. December 1966. (ED-062-650)

11. O'Hara, R.P. *A Theoretical Foundation for the Use of Occupational Information in Guidance (ISVD)*. January 1967. (ED-062-654)

12. Tiedeman, David V. and others. *An Information System for Vocational Decisions (ISVD)*: *Selected Working Papers*. 1967. (ED-062-655, ED-062-652, ED-062-651, and ED-062-649)

13. Tiedeman, David V. *Thought, Choice, and Action*; *Processes of Exploration and Commitment in Career Development*. Volume 1 and Volume 2. August 1967. (ED-050-293 and ED-050-294)

14. Tiedeman, David V. *The Information System for Vocational Decisions: Description, Subsequent Development, and Implications*. July 1968. (ED-060-480)

15. *Annual Report*: *Information System for Vocational Decisions*; *June 1967 to May 1968*. September 1968. (ED-031-928)

16. Tiedeman, David V. *The Cultivation of Careers Through Guidance and Vocational Education*: *Information System for Vocational Decisions*; *Project Report No. 18*. January 1969. (ED-034-212)

17. Tiedeman, David V. and others. *Information System for Vocational Decisions*: *Miscellaneous Project Reports*. 1967-1969. (ED-062-536, ED-061-561, ED-061-562, ED-062-534, ED-062-535, and ED-062-537)

18. Roman, Richard A. *Implementation of a Career Decision Game on a Time Shared Computer*; *An Exploration of Its Value in a Simulated Guidance Environment*; *Information System for Vocational Decisions*. November 1969. (ED-052-497)

19. Tiedeman, David V. *An Information System for Vocational Decisions: Final Report*. May 1970. (ED-042-046)

G. Career Information:

1. Northeastern University. The Career Information Center; A Working Model. 1969. (ED-039-359)
2. Circle, Duncan F. The Career Information Service: A Guide to Its Development and Use. May 1968. (ED-021-300)
3. Whitfield, Edwin A. and Richard Hoover. Regional Center For Collection, Synthesis, and Dissemination of Career Information For Use By Schools of San Diego County (VIEW System). June 1967. (ED-015-513)
4. Stanislaus County Department of Education, California. An Evaluation in Stanislaus County Secondary Schools, 1967-1968: Vocational Information for Education and Work (VIEW). 1968. (ED-051-432/VT-006-469)
5. Smith, Earl Jay. Project VIEW: A Study of the Effectiveness and Efficiency of a Needlesort-Aperture-Card System To Disseminate Occupational Information. August 1968. (Available from University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan 48106)
6. Youst, David B. A Comprehensive Micro-Image File for Occupational Information; Final Report. June 1970. (ED-047-335)
7. Wyoming State Department of Education. Wyoming Occupational Resource Kit (WORK), Index '70. (ED-059-407/VT-013-628)
8. Tonkin, William J. Vocational Guidance Through Videotaping and Television. 1967. (ED-036-047)
9. Lawson, W.H. and John Bancroft. Project NOTIFY: Needed Occupational Television Instruction For Youth. June 1966. (ED-010-641)
10. Minneapolis Public Schools. World of Work; Grade Nine: Teacher's Guide for the School Year 1967-1968. (Manual to accompany a televised series of programs on the world of work.) (ED-031-723)
11. Atlanta Public Schools. Occupational Information Via TV; Occupational Information Materials Project. 1970. (ED-063-462)

12. Florida State Department of Education. Countdown to the 70's: Occupational Information for Upper Elementary and Middle Grades. 1971. (ED-059-364)

13. Occutapes; Career Orientation Videotapes. Columbus, Ohio: Division of Guidance and Testing, Ohio State Department of Education; June 1971. (ED-055-215)

14. U.S. Department of Labor, Bureau of Labor Statistics. Occupational Outlook Handbook; 1972-72 Edition. (Available from U.S. Government Printing Office, Washington, D.C. 20402; price $6.25.) (ED-063-469)

15. U.S. Department of Labor, Bureau of Labor Statistics. Occupational Outlook Handbook; 1970-71 Edition. (ED-044-513)

16. U.S. Department of Labor. Highlights of Qualifications and Training For Jobs Listed in the Occupational Outlook Handbook. 1971. (ED-060-223/VT-013-055)

17. U.S. Department of Labor. Guide to Local Occupational Information. 1969. (ED-039-340 and ED-016-088)

18. Ohio State Department of Education. Sources of Occupational Information. September 1970. (ED-054-390/VT-012-218)

19. U.S. Office of Education and U.S. Department of Labor. Vocational Education and Occupations. 1969. (ED-033-243)

20. Hopke, William E. (Editor). The Encyclopedia of Careers and Vocational Guidance (Revised Edition). Volume I, Planning Your Career; Volume II, Careers and Occupations. 1972. (Available from J.G. Ferguson Publishing Compnay, 277 Park Avenue, New York, New York 10017; price $39.50 per set.)

21. New Jersey State Department of Labor and Industry. Series of Guides Designed To Provide Job Information on Specific Jobs. 1971. (ED-062-563/VT-013-977 through VT-013-983)

22. New Jersey State Department of Labor and Industry. Series of Guides Designed to Provide Job Information on Specific Jobs. 1967-1970. (ED-062-563/VT-014-024 through VT-014-062)

23. Des Roches, Dean L. Occupations For You. Part One and Part Two. (ED-017-704 and ED-029-946)

24. Career Opportunities for Technicians and Specialists (Five-volume set). Chicago: J.G. Ferguson Publishing Co., 1970.

25. U.S. Office of Education. 25 Technical Careers You Can Learn in 2 Years or Less. (ED-060-223/VT-013-567)

26. U.S. Office of Education. Directory of Public Schools Offering Technical Education Programs; Fiscal Year 1969. (ED-039-351)

27. Technical Education Yearbook, 1971-72. Ann Arbor, Michigan: Prakken Publications, Inc. (Price: $10.00.)

28. Graham, R.W. Barron's Guide To The Two-Year Colleges: Volume 1 and Volume 2. (Available from Barron's Educational Series, Woodbury, N.Y.; Prices: Volume 1 - $3.95, Volume 2 - $2.50.)

29. Wisconsin State Employment Service. Careers Without College. (ED-029-135)

30. American Society for Engineering Education. The Engineering Technician. May 1968. (ED-029-103)

31. National Council of Technical Schools. Engineering Technology Careers; Career Guidance Information for Engineering Technicians. Publication No. 1065. 1966. (ED-024-770)

32. American Society for Engineering Education. Technician Career Opportunities in Engineering Technology. 1964. (ED-024-776)

33. Babco, Eleanor. Science, Engineering and Related Career Hints (SEARCH): A Bibliography of Career Information. April 1971. (ED-059-871)

34. Manufacturing Chemists Association. Sources of Career Information in Scientific Fields. 1971. (ED-056-861)

35. Turner, N.D. (editor). Mathematics and My Career; A Collection of Essays. 1971. (ED-052-039)

36. McIlhenny, Loyce J. Careers in Atomic Energy. 1964. (ED-042-647)

37. Evans, Henry K. A Career in Traffic Engineering. (ED-056-238/VT-013-307)

38. Gordon, Bernard L. Marine Careers. 1970. (Available from Department of Earth Sciences, Northeastern University, Boston, Massachusetts; price one dollar.) (ED-055-793)

39. American Society for Oceanography. The Oceans and You. 1971. (ED-064-088)

40. Naval Oceanographic Office. University Curricula in the Marine Sciences and Related Fields: Academic Years 1971-72 and 1972-73. August 1971. (ED-063-861)

41. U.S. Coast Guard Academy. Counselor's Handbook For Advising Students Applying For Appointment to United States Coast Guard Academy. 1971. (ED-062-563/VT-013-742)

42. National Center for Information on Careers in Education. Youth and Careers in Education. October 1971. (ED-057-015)

43. Hyer, Anna L. Jobs in Instructional Media Study (JIMS): Final Report. September 1971. (ED-061-463)

44. Council for Exceptional Children, NEA. Careers in Special Education. April 1968. (ED-028-586)

45. Eisenbud, Robert E. Career Opportunities in the Field of Mental Retardation. March 1969. (ED-029-437)

46. Berman, Gerald S. Bridges and Ladders: A Descriptive Study in New Careers; Rehabilitation Occupations for the Disadvantaged and Advantaged. November 1971. (ED-058-522)

47. Lynton, Edith F. The Subprofessional; From Concepts to Careers. 1967. (ED-029-169)

48. Yabroff, Bernard and Marc A. Matland. New Careers for the Subprofessional. 1970. (ED-049-357)

49. Matthews, Howard A. Career Opportunities for Associate Professional Manpower. October 1971. (ED-057-253)

50. Rittenhouse, Carl H. Paraprofessional Aides in Education. PREP Report No. 12. Washington, D. C.: National Center for Educational Communication, U.S. Office of Education; 1972. (ED-034-906)

51. Paraprofessionals in Schools: How New Careerists Bolster Education. 1972. (ED-059-171)

52. National Association of Housing and Redevelopment Officials. Tenant Services Personnel: 48 Job Descriptions from Large Housing Authorities. June 1970. (ED-053-339/VT-012-381)

53. New Jersey Health Careers Service. Health Careers Bibliography For Guidance Counselors; Second Edition. 1970. (ED-056-238/VT-012-813)

54. Coleman, Arthur D. Selected Health Service Occupations. May 1966. (ED-040-292)

55. Health Careers Information Materials. Packet of 32 brochures; 1970. (Available from Health Careers of Ohio, P.O. Box 5574, 1480 West Lane Avenue, Columbus, Ohio 43221.)

56. Directory of Approved Allied Medical Educational Programs; 1971. (Available from American Medical Association, Department of Allied Medical Professions and Services, 535 North Dearborn Street, Chicago, Illinois 60610.)

57. U.S. Department of Health, Education, and Welfare. Nursing Careers in the Indian Health Service. 1971. (ED-062-563/VT-013-739)

58. Kenworthy, Betts. Careers For the Handicapped in Medical Laboratories. Final Report. July 1969. (ED-060-170)

59. Technical Education Research Center. Development of Career Opportunities for Technicians in the Nuclear Medicine Field; Interim Report: Survey of Job Characteristics, Manpower Needs, and Training Resources. August 1969. (ED-042-902)

60. Technical Education Research Center. Development of Career Opportunities for Biomedical Equipment Technicians; Interim Report: Survey of Job Characteristics, Manpower Needs, and Training Resources. June 1970. (ED-043-764)

61. Ballinger, Raymond A. Opportunities in Graphic Arts Careers. 1968. (Available from Vocational Guidance Manuals, 235 East 45th Street, New York, New York 10017; Price: $1.65.)

62. Graphic Arts Technical Foundation. *Graphic Communications: Career Speech for Junior High Students*. (ED-052-390/VT-011-865)

63. Graphic Arts Technical Foundation. *Graphic Communications: Career Speech for Senior High Students*. (ED-052-390/VT-011-864)

64. *Careers in Speech Communication*. 1967. (Available from Speech Communication Association, Statler Hilton Hotel, New York, N.Y. 10001; price 15 cents.) (ED-043-626)

65. Seligsohn, I.J. *Your Career in Computer Programming*. 1968. (Available from Julian Messner, Messner Certified Editions, 1 West 39th Street, New York, N.Y. 10018; price $3.64.) (ED-037-342)

66. Lincoln Public Schools, Nebraska. *Handbook of Aerospace-Related Occupations*. 1969. (ED-051-432/VT-011-326)

67. Traylor, W.L. *Pilot's Guide to an Airline Career, Including Sample Pre-Employment Tests*. August 1969. (Available from Aviation Book Company, 565 West Glenoaks Boulevard, Glendale, Calif. 91202; price $5.95.) (ED-033-231)

68. Creel, Jane. *Careers in Home Economics*. June 1969. (ED-051-432/VT-010-997)

69. *Food for Thought; Careers in the Restaurant Industry*. 1968. (Available from Ohio State Restaurant Association, 40 South Third Street, Suite 418, Columbus, Ohio 43215; price ten cents.)

70. U.S. Department of Labor. *Labor in the Textile and Apparel Industries*. August 1969. (ED-051-432/VT-011-823)

71. Ohio State Council of Retail Merchants. *Careers in Retailing*. (ED-056-238/VT-012-390)

72. *Career Information: Marketing and Distribution*. July 1970. (Available from American Vocational Association, 1510 H Street, N.W., Washington, D.C. 20005; Stock No. 33370; price eighty cents.)

73. *Career Information: Business and Office Occupations*. July 1970. (Available from American Vocational Association, 1510 H Street, N.W., Washington, D.C. 20005; Stock No. 34270; price sixty cents.)

74. Hoover, Norman K. and Glenn Z. Stevens. Development and Evaluation of Occupational Information in Agriculture. 1969. (ED-050-251)

75. Diley, William. Agri-Business, Is It For Me? 1971. (ED-050-247)

76. University of Arizona. Resource Unit on Career Opportunities in Agriculture for Core Curriculum. July 1970. (ED-052-390/VT-011-954)

77. North Carolina State Board of Education. Agricultural Technology Opportunities. October 1963. (ED-023-815)

78. U.S. Department of Labor. Occupations and Trends in the Dairy Industry. 1970. (ED-051-432/VT-011-460)

79. U.S. Civil Service Commission. Careers As Agricultural Commodity Graders in the Consumer and Marketing Service of the U.S. Department of Agriculture. April 1971. (ED-059-407/VT-013-732)

80. U.S. Department of Agriculture. A Job With The Forest Service: A Guide To Nonprofessional Employment. February 1970. (ED-051-432/VT-011-344)

81. Rillo, Thomas J. Vocational Opportunities for the Technically Trained Individual in Conservation and Outdoor Recreation. August 1969. (ED-037-770)

82. University of Oregon, Department of Recreation and Park Management. Careers in Parks and Recreation. 1970. (ED-042-543)

83. Bachert, R.E. Directory of Degree Programs Related to Conservation, Ecology, Environmental Education, Environmental Science, Outdoor Education, and Natural Resources. Danville, Illinois: The Interstate Printers and Publishers, Inc. (Price: $1.25)

84. Potts, Frank. Jobs in the Plastics Industry. 1970. (ED-057-254/VT-012-640)

85. American Welding Society. Opportunities in the Welding Industry. May 1968. (ED-052-390/VT-010-984)

86. Materials Handling Institute. Careers With Material Handling Equipment Manufacturers. 1970. (ED-052-390/VT-011-434)

87. New Jersey State Employment Service. *Occupations in the Film Processing and Finishing Industry*. August 1969. (ED-051-432/VT-011-478)

88. South Dakota State Board of Vocational Education. *Apprenticeship: Career Training With A Future*. (ED-062-563/VT-013-871)

89. Ohio State Department of Education. *The Ohio Apprenticeship Notebook for School Counselors*. March 1970. (ED-051-432/VT-011-010)

90. Arizona State Employment Security Commission. *Apprenticeship in Arizona*. July 1969. (ED-051-432/VT-011-576)

91. Minnesota State Department of Education. *Career Opportunities Through Apprenticeship*. 1968. (ED-051-432/VT-009-606)

92. *Construction Industry Opportunities Through Apprentice Training*. May 1969. (Available from Associated General Contractors of Minnesota, 910 Builders Exchange Building, Minneapolis, Minnesota 55402.)

93. National Home Study Council. *A Counselor's Guide to Home Study Training*. (ED-062-563/VT-013-844)

H. *Placement and Follow-Up*:

1. Little, J.K. *Review and Synthesis of Research on the Placement and Follow-Up of Vocational Education Students*. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; February 1970. (ED-037-543)

2. McCracken, J.D. *Targeted Communications for Instituting Vocational Placement and Followup: Interim Report*. December 1971. (ED-061-454)

3. McCracken, J.D. *Targeted Communications for Instituting Vocational Placement and Followup: Final Report and Appendixes*. February 1972. (ED-061-451)

4. Miller, M.D. and Wesley E. Budke. Job Placement and Followup of Secondary School Vocational Education Students. PREP Report No. 32. Washington, D.C.: National Center for Educational Communication, U.S. Office of Education; 1972. (Available from U.S. Government Printing Office, Washington, D.C. 20402; price 55 cents.)

5. Allen, Thomas R. Job Placement Coordinator's Handbook. 1972. (ED-060-211)

6. New Jersey State Department of Education. Job Placement Services; A Guidebook for Counselors. 1968. (ED-042-005)

7. Pell, Arthur R. and Maxwell Harper. Starting and Managing an Employment Agency. 1971. (ED-062-551)

8. Glenn, Mary. Student Placement and Follow-Up Services in the Junior College. May 1968. (ED-022-443)

9. Milwaukee Vocational, Technical, and Adult School. You and Your Job: A Suggested Guide for Instructors. 1967. (ED-052-390/VT-011-322)

10. Milwaukee Vocational, Technical, and Adult School. You and Your Job: What Is It? Where Is It? How To Get It? How To Keep It? Where Do You Go From Here? 1968. (Available from J.G. Ferguson Publishing Company, 6 North Michigan Avenue, Chicago, Illinois 60602; price $2.20.)

11. Ohio State University. Deciding on And Locating Your Kind of Job. 1971. (ED-062-563/VT-013-888)

12. Ohio State University. Getting Your Job. 1971. (ED-062-563/VT-013-889)

13. Sizemore, Earl M. and Bruce L. Dobbs. Job Guide For Young Workers, 1969-70 Edition. (ED-058-388)

14. Kansas State Department of Education. Young Workers: A Forgotten Group. 1971. (ED-062-538)

15. Sharp, Laure M. The Use of Follow-Up Studies in the Evaluation of Vocational Education. May 1966. (ED-010-072)

16. California State Department of Education, Bureau of Industrial Education. A Proposed System for Reporting Job Placement Follow-Through Data. 1968. (ED-022-916)

17. ERIC Clearinghouse on Counseling and Personnel Services, "Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement." November 1969. (ED-033-254)

I. Women in the World of Work:

1. Kievit, Mary Bach. Review and Synthesis of Research on Women in the World of Work. Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University; March 1972. (VT-014-690)

2. U.S. Department of Labor, Women's Bureau. Expanding Opportunities for Girls; Their Special Counseling Needs. May 1970. (ED-052-315)

3. "Counseling for Women's Roles in the 1980's." Chapter 10 in Guidance-Personnel Work: Future Tense, edited by Margaret Ruth Smith. 1966. (Available from Teachers College Press, Columbia University, 525 West 120th Street, New York, N.Y. 10027)

4. Lee, Sylvia L. High School Senior Girls and the World of Work: Occupational Knowledge, Attitudes, and Plans. January 1971. (ED-047-155)

5. Fairbank, Jane D. and Susan G. Bell. Second Careers for Women: A View from the San Francisco Peninsula. October 1971. (ED-059-429)

6. Cole, Nancy S. On Measuring The Vocational Interests of Women. March 1972. (ED-060-821)

7. Pietrofesa, John J. and Nancy K. Schlossberg. Counselor Bias and the Female Occupational Role. 1970. (ED-044-749)

8. Vetter, Louise. Planning Ahead for the World of Work: Research Report Abstract, Teacher Manual, Student Materials, Transparency Masters. January 1971. (ED-050-272)

J. Approaches to Evaluation:

1. Morgan, Robert L. An Approach to Evaluation: A Model for Evaluating the North Carolina Exemplary Program. July 1970. (ED-042-910)
2. U.S. Office of Education. Preparing Evaluation Reports: A Guide For Authors. 1970. (Available from U.S. Government Printing Office, Washington, D.C. 20402; Catalog No. HE 5.210:10065; price 65 cents.)
3. Stenner, A.J. An Overview of Information Based Evaluation: A Design Procedure. 1972. (Available from the Institute for the Development of Educational Auditing, 1121 Arlington Blvd., Arlington, Virginia 22209; price three dollars.)
4. Stenner, A.J. and W.J. Webster. Educational Program Audit Handbook. 1971. (Available from the Institute for the Development of Educational Auditing, 1121 Arlington Blvd., Arlington, Virginia 22209; price six dollars.)

K. Related Studies:

1. Holland, John L. A Psychological Classification of Occupations. November 1970. (ED-044-534)
2. Viernstein, Mary Cowan. The Extension of Holland's Occupational Classification To All Occupations in the Dictionary of Occupational Titles. April 1971. (ED-051-420)
3. Holland, John L. Applying an Occupational Classification to a Representative Sample of Work Histories. November 1971. (ED-060-184)
4. Holland, John L. A Guide To The Self-Directed Career Program: A Practical and Inexpensive Vocational Guidance System. March 1972. (ED-064-516)
5. Lewis, Ann H. and William E. Sedlacek. Socioeconomic Level Differences on Holland's Self-Directed Search (SDS). 1971. (ED-059-702)
6. Zener, Thelma B. and Leslie Schnuelle. An Evaluation of the Self-Directed Search: A Guide to Educational and Vocational Planning. February 1972. (ED-061-458)

7. D'Costa, Ayres G. The Differentiation of High School Students in Vocational Education Areas By the Ohio Vocational Interest Survey. June 1968. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 68-14885, Price $10.00.)

8. D'Costa, Ayres G. The Development of the Ohio Vocational Interest Survey. December 1968. (ED-031-715)

9. D'Costa, Ayres G. The Development of A Vocational Interest Survey Using the Data-People-Things Model of Work. April 1969. (ED-033-385)

10. D'Costa, Ayres G. The Role of Interests and Interest Management in Guidance. April 1969. (ED-033-391)

11. Winefordner, David W. Orienting Students to the World of Work Using the Data-People-Things Conceptual Framework and the Ohio Vocational Interest Survey. April 1969. (ED-029-343)

12. Forrest, David J. An Objective Multidimensional Measure of Vocational Maturity: Development and Validation. (Career Development Inventory) (ED-064-486)

13. Westbrook, B.W. Toward the Validation of the Construct of Vocational Maturity. 1971. (ED-057-255)

14. Impellitteri, Joseph T. and Jerome T. Kapes. The Measurement of Occupational Values. September 1971. (ED-059-357)

15. Reardon, Francis J. The Development and Evaluation of a Test to Measure Occupational Awareness. April 1972. (ED-064-371)

16. Akamine, Toshio and Harold G. Heiner. Development of An Experimental Forced-Choice Occupational Preference Inventory. June 1968. (ED-022-959)

17. Olsen, LeRoy C. and William H. Veneman. Development of A Projective Technique For Obtaining Educationally Useful Information Indicating Pupils' Attitudes Toward Work and Occupational Plans. June 1968. (ED-022-960)

18. Kapes, Jerome T. Exploring the Use of the GATB with Vocational-Technical Bound Ninth Grade Boys. January 1969. (ED-026-536)

19. Landis, William H. *Secondary Students' Mathematics Competencies in Relation to Employment Tests*. 1967. (ED-016-784)

20. Boyd, Joseph L. and Benjamin Shimberg. *Directory of Achievement Tests for Occupational Education*. Princeton, New Jersey: Educational Testing Service. (Price: $2.00)

21. Hogan, Robert. *An Extension of the Similarity-Attraction Hypothesis To The Study of Vocational Behavior*. June 1971. (ED-052-591)

22. Tatum, J.P. *Variables Related To The Educational-Vocational Decision-Making of High School Seniors*. 1967. (Available from University Microfilms, P.O. Box 1764, Ann Arbor, Michigan 48106; Order No. 68-463, Price $10.00.)

23. Purdue University. *75,000 High School Seniors; Their Educational and Vocational Plans: Results of a Survey of Indiana's High School Senior Class of 1969*. April 1970. (ED-051-432/VT-011-813)

24. Purdue University. *Trends in Indiana High School Seniors' Education and Vocational Plans; Comparison of Classes of 1966 and 1969*. February 1971. (ED-060-223/VT-013-358)

25. Mondart, C.L. *Educational and Occupational Aspirations and Expectations of High School Youth*. 1970. (ED-048-452)

26. Southern Regional Committee for Family Life. *Educational and Vocational Goals of Urban Youth in the South*. August 1968. (ED-061-439)

27. Shill, James F. *Careers of Rural Male High School Seniors in Mississippi: A Study of Occupational Interests, Aspirations, and Expectations*. October 1968. (ED-058-972)

28. Kuvlesky, William P. *Implications of Recent Research on Occupational and Educational Ambitions of Disadvantaged Rural Youth for Vocational Education*. July 1970. (ED-041-692)

29. Smith, Robert and Harold Proshansky. *Conceptions of Work, Play, Competence, and Occupation in Junior and Senior High School Students; A Study of Work Orientations of Teenagers*. September 1967. (ED-016-257)

30. Leton, Donald A. and Carol J. Dodd. *Concepts of Career Fields Held by Eleventh Grade Students*. 1968. (ED-024-081)

31. Clark, Edward T. *Culturally Disadvantaged Boys' and Girls' Aspirations to and Knowledge of White-Collar and Professional Occupations*. 1965. (ED-024-697)

32. Bennett, J.G. *Disadvantaged and Non-Disadvantaged Urban High School Students' Perceptions of Work within General Merchandise Retail Department Stores*. 1971. (ED-061-441)

33. Heltzel, Frances B. *Motives Influencing Needs To Achieve in Vocational Education*. June 1966. (ED-010-295)

34. Leonard, George E. *Level of Aspiration as a Factor in Inner-City Career Guidance*. August 1968. (ED-024-067)

35. Grinder, Robert E. *A Study of the Influences of the Father's Job and Social Status on the Occupational and Social Goals of Youth*. August 1967. (ED-016-849)

36. Ellis, Robert A. *Planned and Unplanned Aspects of Occupational Choices by Youth*. August 1967. (ED-024-780)

37. Bailey, John A. *The Relevance of Occupational Information to Career-Choice Theory and Decision Making*. March 1969. (ED-029-345)

38. Underwood, K.L. *Some Trends in Vocational Development Research*. 1965. (ED-027-557)

39. Morris, Eugene E. *A Survey of the Literature on Philosophies and Approaches to Career Development*. February 1969. (ED-030-733)

40. Osipow, S.H. *Theories of Career Development*: *A Comparison of the Theories*. 1968. (ED-026-698)

41. Hollender, John. *Parental and Personal Influences on the Development of Vocational Interests in Adolescence*. February 1969. (ED-034-249)

42. Crites, John O. *Vocational Development and Vocational Education in Adolescence*. December 1969. (ED-058-451)

43. Hilton, Thomas L. A Study of Intellectual Growth and Vocational Development; Final Report. March 1971. (ED-056-063, ED-056-099, and ED-056-100.)

44. Gribbons, W.D. and Paul R. Lohnes. Career Development; Longitudinal Study. 1966. (ED-010-282)

45. Gribbons, W.D. and Paul R. Lohnes. Career Development; Interim Report. October 1968. (ED-028-490)

46. Gribbons, Warren D. Career Development from Age 13 to Age 25. 1969. (ED-040-477)

47. Education Commission of the States. Vocation as "Calling." December 1971. (ED-060-188)

48. Education Commission of the States. National Assessment of Educational Progress: Objectives for Career and Occupational Development. 1971. (ED-059-119)

49. Sorensen, A.B. The Occupational Mobility Process: An Analysis of Occupational Careers. March 1972. (ED-064-496)

50. Thal-Larsen, Margaret. Occupations: Values and Survival. May 1971. (ED-063-541)

51. Sjogren, Douglas. Review and Synthesis of Research on Occupational Adaptability. July 1971. (ED-057-182)

52. Appel, V.H. and Donald B. Witzke. Goal-Orientation vs. Self-Orientation: Two Perspectives Affecting Indecision About Collegiate Major and Career Choice. April 1972. (ED-063-855)

53. Windle, J.L. Review of Research: Career Planning and Development, Placement, and Recruitment of College Trained Personnel. 1972. (ED-063-536)

54. Calvert, Robert, Jr. Career Patterns of Liberal Arts Graduates. 1969. (Available from The Carroll Press, 43 Squantum Street, Cranston, R.I. 02920; Price $6.25)

55. Snelling, W.R. and Robert F. Boruch. Science in Liberal Arts Colleges: A Longitudinal Study of 49 Selective Colleges. New York: Columbia University Press, 1972.

56. Crowley, Anne E. A Longitudinal Study of the Career Development of Health Professionals. April 1972. (ED-063-500)

57. Culclasure, David F. Development of Career Motivational Prediction and Selection Procedures. January 1971. (Available from National Technical Information Service, Springfield, Virginia 22151; Catalog No. AD-728-625, Price $3.00)

58. Bowers, Raymond V. Impact of Technological Change on Executive and Professional Careers in Military and Civilian Organizations. November 1968. (Available from National Technical Information Service, Springfield, Virginia 22151; Catalog No. AD-684-634, Price $3.00)

59. Moss, Jerome Jr., and others. A Summary of a Rationale For Education For Work. April 1972. (ED-062-539)

60. Wirth, Arthur G. Education in The Technological Society: The Vocational-Liberal Studies Debate in the Early Twentieth Century. Scranton, Pennsylvania: Intext Educational Publishers, 1971. (Price $5.25.)

SECTION IV
CONTINUING SOURCES OF INFORMATION

1. Research in Education. Monthly abstract journal announcing recently completed research and research-related reports in the field of education.

   This monthly journal provides abstracts of recent research reports, related documents, and educational resource materials. Items related to career education can be located in the subject index under the heading of "Career Education." An "ED" number is provided for each abstract; this "ED" number can be used to order the entire document, either on microfiche or hard copy, from the ERIC Document Reproduction Service. A subscription to Research in Education can be obtained for $21.00 per year from the U.S. Government Printing Office, Washington, D.C. 20402.

2. Abstracts of Research Materials in Vocational and Technical Education (ARM). Quarterly abstract journal announcing recently completed research and research-related documents in vocational, occupational, technical, and career education.

   This quarterly journal provides abstracts of recent research reports and related documents. Items related to career education can be located in the subject index under the heading of "Career Education." A "VT" number is provided for each abstract; this "VT" number can be used to secure the entire document on microfiche from a VT-ERIC Microfiche Set, available from the ERIC Document Reproduction Service. A subscription to ARM can be obtained for $11.00 per year from The Center for Vocational and Technical Education, Ohio State University, 1900 Kenny Road, Columbus, Ohio 43210.

3. Abstracts of Instructional Materials in Vocational and Technical Education (AIM). Quarterly abstract journal announcing recently developed instructional materials for use in vocational, occupational, technical, and career education.

   This quarterly journal provides abstracts of recently developed instructional materials and curriculum guides. Items related to career education can be located in the subject index under such headings as "Career Education," "Occupational Exploration," and "Occupational Information." A "VT" number is provided for each abstract; this "VT" number can be used to secure the instructional materials on microfiche from a VT-ERIC Microfiche Set, available from the ERIC Document Reproduction Service. A subscription to AIM can be obtained for $11.00 per year from the Center for Vocational and Technical Education, Ohio State University, 1900 Kenny Road, Columbus, Ohio 43210.

4. Current Index to Journals in Education (CIJE). Monthly publication citing and indexing current articles in the journal literature.

   This monthly publication provides detailed indexing for articles appearing in more than 500 education and education-related journals. Articles related to career education can be located in the subject index under the heading of "Career Education." A subscription to CIJE can be obtained for $39.00 per year from CCM Information Corporation, 866 Third Avenue, New York, N.Y. 10022.

5. Inform. Monthly newsletter identifying accurate, relevant career information sources and dissemination techniques for the active counselor.

   This monthly newsletter, sponsored by APGA, places special emphasis on materials that normally do not come to the counselor's attention and on materials presenting information about new and emerging careers. A series of career resource bibliographies is provided as a supplement to the monthly newsletter. A subscription to Inform and the supplements can be obtained for $25.00 per year from the National Career Information Center, 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009.

6. Career World. Monthly career education magazine for high school students.

   This magazine, published monthly from September through May, provides up-to-date career information for students in junior and senior high schools. Each issue contains a systematic examination of two career clusters, a guidance feature which helps each student find out about himself and his interests, detailed information on several specific occupations, a discussion of how current events are shaping future occupations, tips for getting part-time jobs while in school, etc. A subscription to Career World can be obtained for $2.95 per student per school year (minimum of 15 students); order from Curriculum Innovations, Inc., 501 Lake Forest Avenue, Highwood, Illinois 60040.

7. Occupational Outlook Quarterly. Quarterly journal providing interesting and readable articles on the current outlook for occupations in a variety of career areas.

   This quarterly journal, prepared by the U.S. Department of Labor, provides well-written, illustrated articles with titles such as: "Logging -- A Job for the Hardy," "Physician's Assistant -- Medical Occupation in the Making," "Business Machine and Computer Manufacturing -- Career Opportunities Are Excellent," "The Trucking Industry -- Highway to a Career." A subscription to Occupational Outlook Quarterly can be obtained for $1.50 per year from the U.S. Government Printing Office, Washington, D.C. 20402.

WORKING PAPER
January 3, 1972

CAREER CLUSTERS: AN ORGANIZATIONAL TECHNIQUE TO FACILITATE THE DELIVERY OF CAREER EDUCATION

prepared by

Staff Committees of the
Division of Vocational and Technical Education

with coordination from

Michael Russo

Division of Vocational and Technical Education
Bureau of Adult, Vocational, and Technical Education
U.S. Office of Education
Washington, D.C.

1/3/72

CAREER CLUSTERS

An Organizational Technique to Facilitate the Delivery of Career Education

In a career education program, each student is helped to develop a very broad awareness of the full range of career options in the world of work. At the same time; he is helped to develop his own self-awareness, to become congnizant of his own strengths and weaknesses, his aptitudes and capabilities, and his interests and needs so that he can make a realistic consideration of himself in relation to the many career options available in the world of work. In addition, he is helped to practice and develop logical direction-setting and decision-making skills which will be useful to him throughout his lifetime in considering alternative career possibilities.

After becoming aware of the full range of career options in the world of work, each student is provided with opportunities to explore in considerable depth those kinds of careers which he feels are of most interest to him and most suited to his needs and capabilities. He has a chance, through realistic exploratory experiences, to test himself against the activities and requirements typical of a number of career areas of his choice.

He is then in a position to make a rational choice of an appropriate career goal. Needless to say, this thorough and systematic approach to career possibilities is far better for the individual than the currently prevalent practices, which make career selection more a matter of happenstance than a rational activity.

Once a student has established for himself a tentative career goal, he is helped to plan an appropriate educational path to that goal, and he is provided with those educational programs and work experiences which will enable him to achieve the goal. For a given student, depending upon the nature of his particular career goal, the educational path may involve going through a four-year college, going to a two-year college, or going through job preparation experiences at the secondary-school level which will enable him to go directly to work when he leaves high school.

The problems of delivering this type of comprehensive career education are compounded by the complexity of the American economy and the diversity of the American labor force. The Dictionary of Occupational Titles, for example, lists more than twenty thousand individual jobs. Obviously, dealing with each of these individual jobs would be administratively impossible when designing and implementing a career awareness program or when providing other aspects of career education. The only feasible solution seems to be to group these jobs into a series of manageable clusters. While it is not possible to deal with twenty thousand separate jobs, it would be feasible to deal with 15 or 20 broad career clusters.

Any scheme which is developed for clustering jobs for career education purposes should meet four basic requirements:

1. The cluster scheme should be such that it encompasses all the jobs in the Dictionary of Occupational Titles. In other words, after the cluster scheme has been established, it should be possible to fit each and every job in the Dictionary of Occupational Titles into some one of the career clusters which have been designated.

2. Each cluster should include jobs at all levels, from entry-level through skilled jobs, technical jobs, and professional jobs. That is to say, each cluster should contain a logical career ladder of jobs requiring increasing levels of education.

3. Each cluster should be related to an identifiable group of employers. For example, if we have a cluster in the health occupations, it is possible to identify within the community a group of potential employers, such as hospital administrators, private physicians, and dentists, who could relate to this particular cluster. Similarly, if we have a cluster in the construction occupations it is possible to identify in a given community various construction contractors and construction firms who could relate to this career cluster.

4. The clusters should be enduring over time. That is, each cluster should represent a continuing societal function which will be carried on throughout the foreseeable future. For example, it can be assumed that for the foreseeable future our society will be manufacturing things, constructing things, transporting things and providing health services for the people. Therefore, clusters in the manufacturing occupations, the construction occupations, the transportation occupations, and the health occupations are likely to be enduring over time. Although individual jobs within these clusters may be phased out due to technological change, other new and emerging jobs will appear in each cluster to take the place of those phased out. If an individual has had well-rounded training in the common core of a particular cluster, his flexibility for moving to another job within that cluster will be facilitated, should his present job disappear as a result of technological change. Having mastered the common core of the cluster, he would be able, with a minimum amount of retraining, to move to another type of emerging job within that same cluster. This will provide individuals with the flexibility needed to cope with the changing nature of our economy and our labor force.

The U. S. Office of Education has developed a cluster scheme which, it is believed, meets the four requirements specified above. This cluster scheme consists of 15 career clusters, which are:

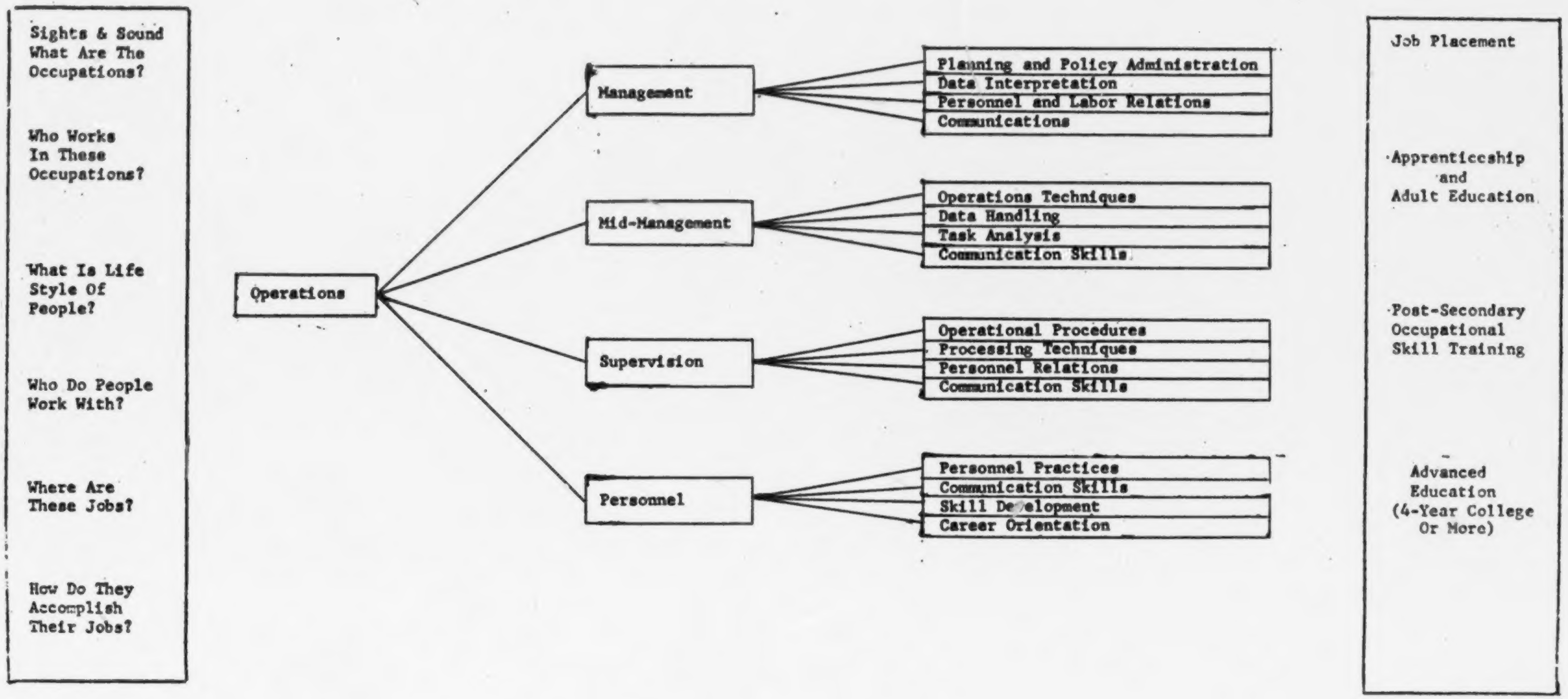
Construction Occupations Cluster
Manufacturing Occupations Cluster
Transportation Occupations Cluster
Agri-Business and Natural Resources Occupations Cluster
Marine Science Occupations Cluster
Environmental Occupations Cluster
Business and Office Occupations Cluster
Marketing and Distribution Occupations Cluster
Communications and Media Occupations Cluster
Hospitality and Recreation Occupations Cluster
Personal Service Occupations Cluster
Public Services Occupations Cluster
Health Occupations Cluster
Consumer and Homemaking Occupations Cluster
Fine Arts and Humanities Occupations Cluster

The attached charts represent a "first cut" at blocking out the scope of each cluster. Each of the 15 career clusters has been subdivided into a number of sub-clusters, which have been further "shredded out" into more discrete functions at increasing levels of specificity. The charts are still in draft form and will require considerable refinement, but they will serve to illustrate the nature and content of each of the clusters.

Developed By: USOE/DVTE
DRAFT
Date: 9/14/71

CLUSTER FOR
BUSINESS AND OFFICE OCCUPATIONS

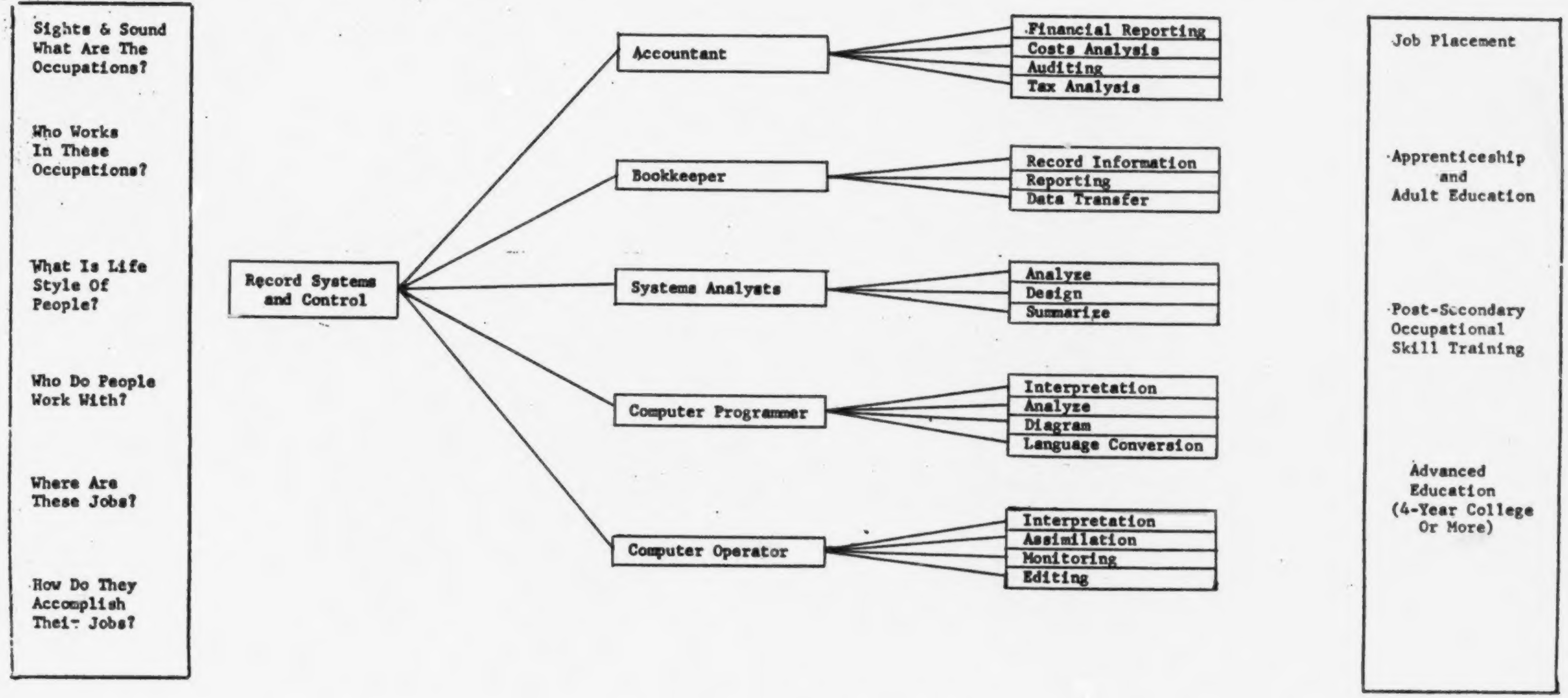
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Developed By: USOE/DVTE
DRAFT
Date 9/14/71

CLUSTER FOR
BUSINESS AND OFFICE OCCUPATIONS

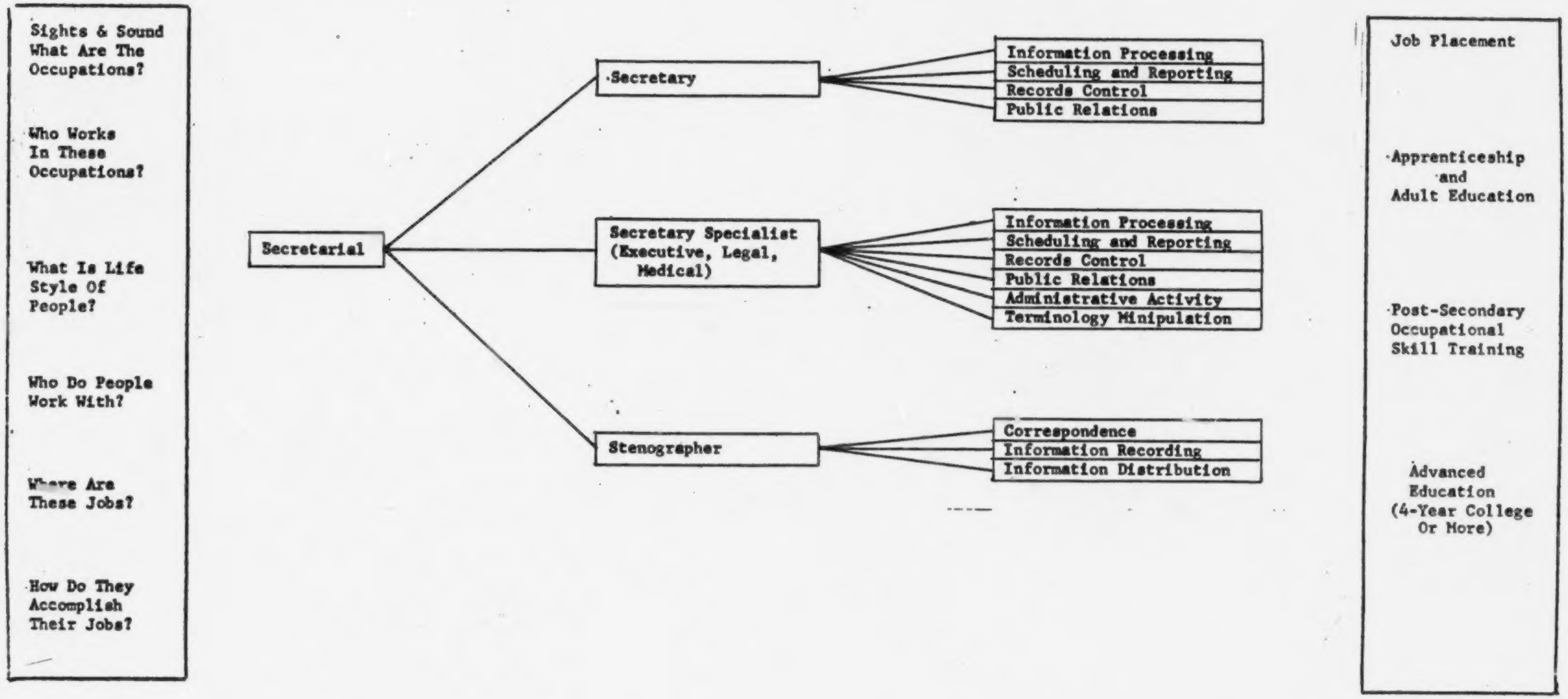
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



CLUSTER FOR
BUSINESS AND OFFICE OCCUPATIONS

Developed By: USOE/DVTE
DRAFT
Date 9/14/71

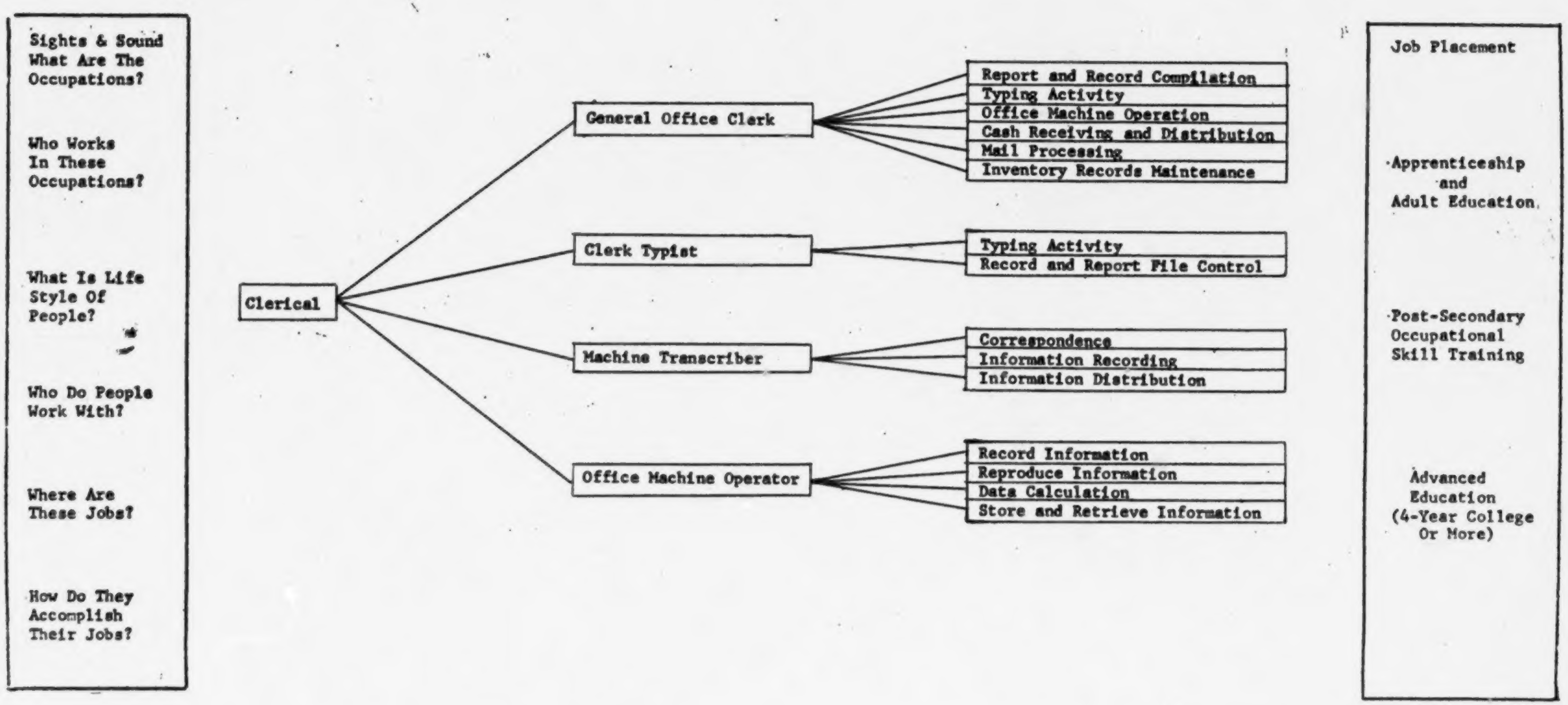
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Developed By: USOE/DVTE
DRAFT
Date 9/14/71

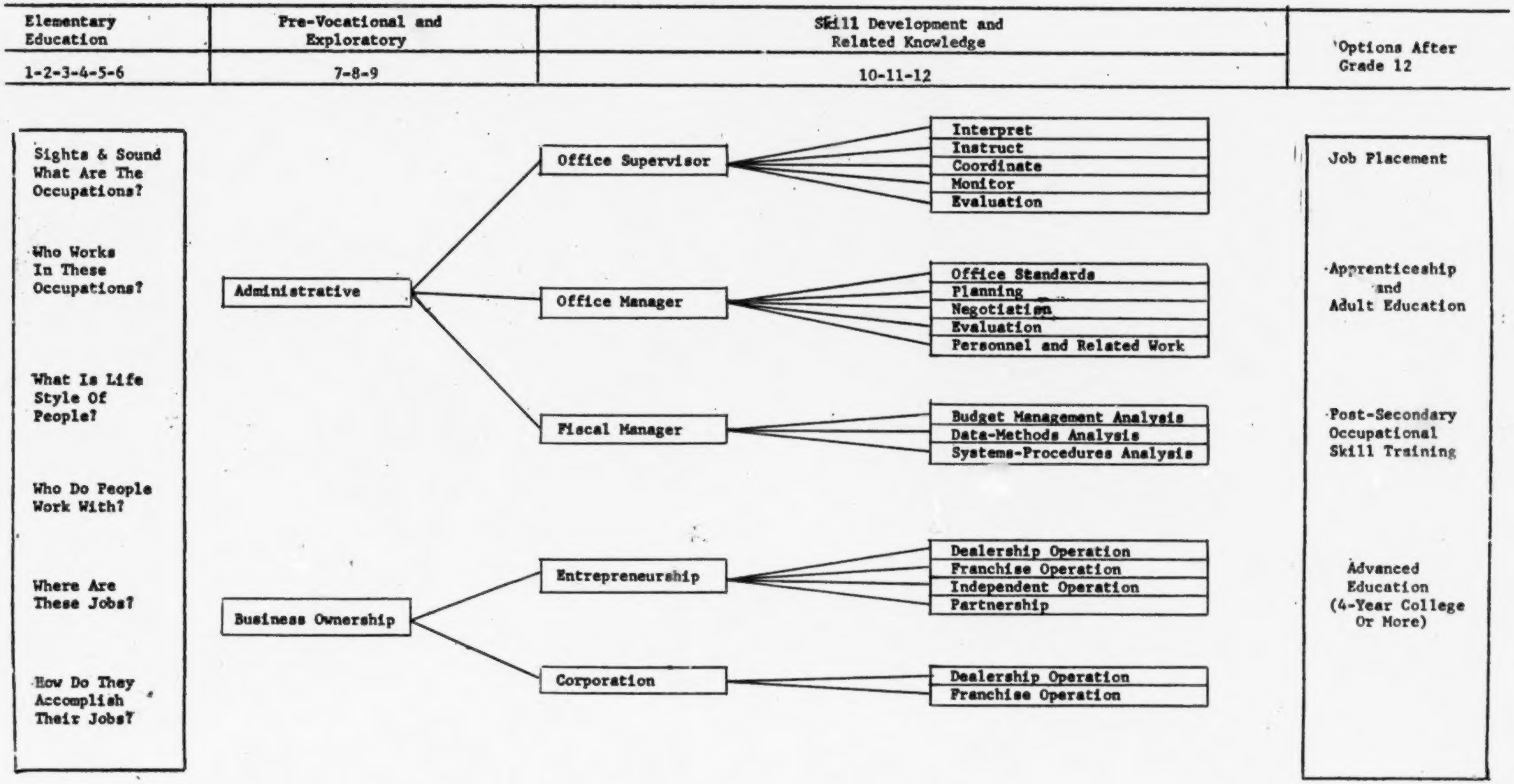
CLUSTER FOR
BUSINESS AND OFFICE OCCUPATIONS

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Clerical
General Office Clerk
Report and Record Compilation
Typing Activity
Office Machine Operation
Cash Receiving and Distribution
Mail Processing
Inventory Records Maintenance
Clerk Typist
Typing Activity
Record and Report File Control
Machine Transcriber
Correspondence
Information Recording
Information Distribution
Office Machine Operator
Record Information
Reproduce Information
Data Calculation
Store and Retrieve Information
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
DRAFT
Date 9/14/71

CLUSTER FOR
BUSINESS AND OFFICE OCCUPATIONS



FILMED FROM BEST AVAILABLE COPY

Developed by: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
PUBLIC SERVICE

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

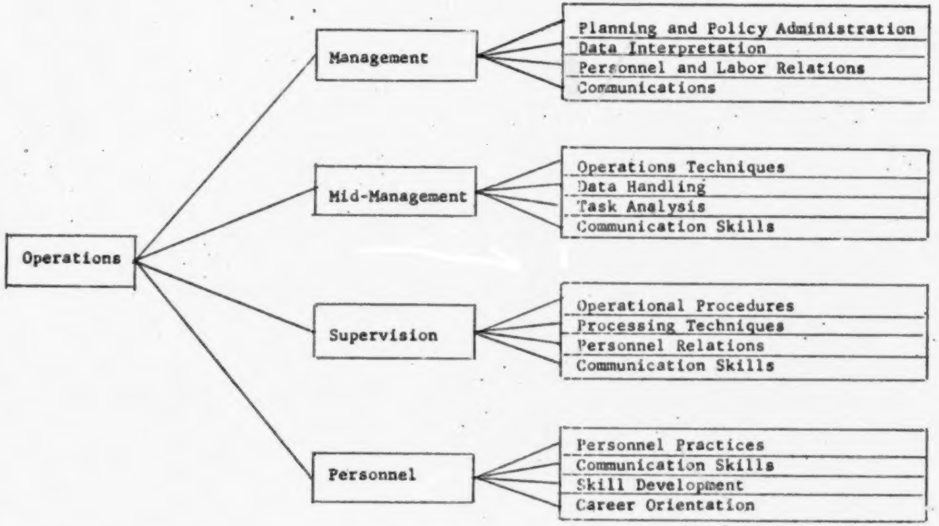
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

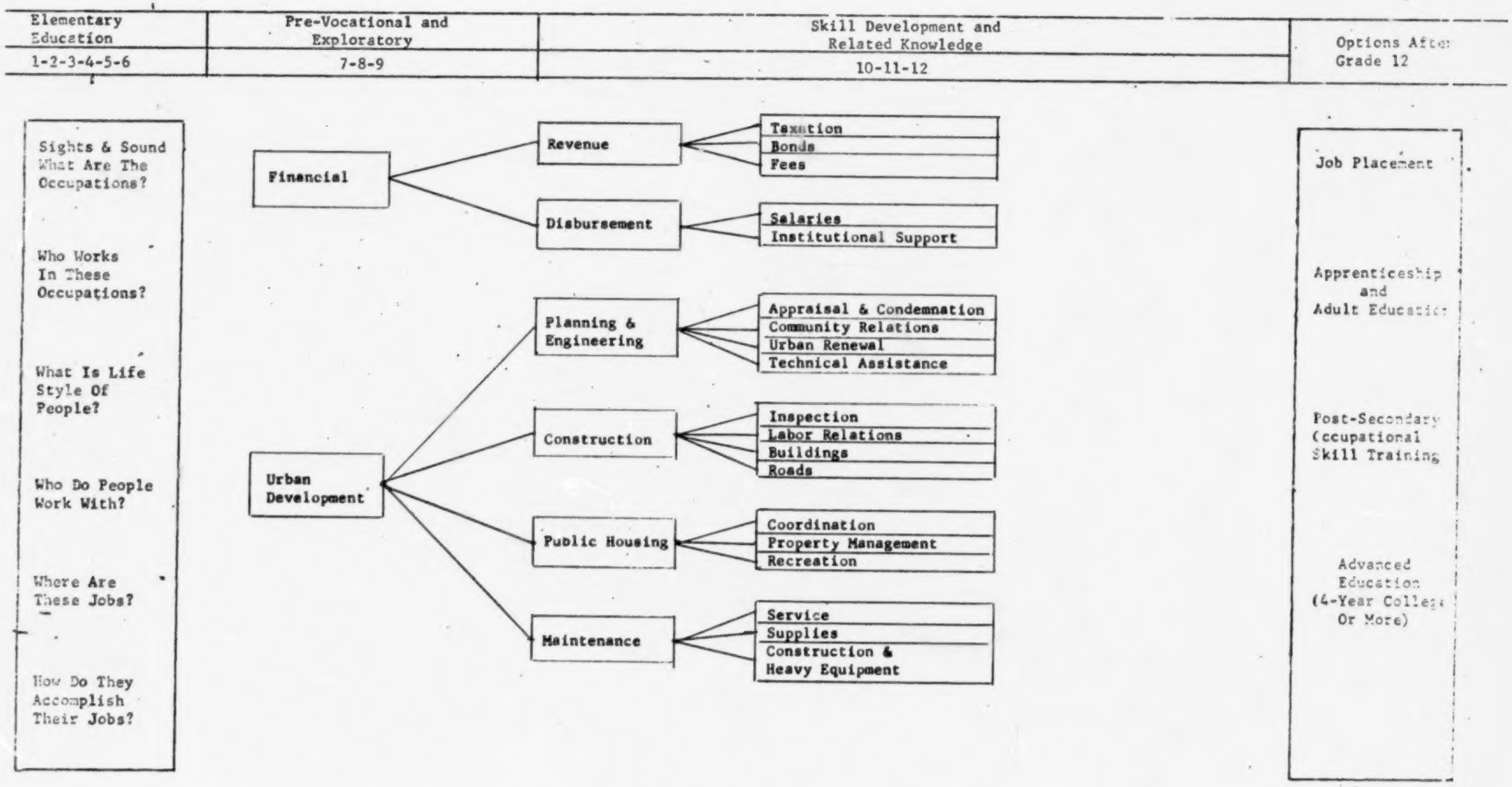
Apprenticeship and Adult Education

Post-Secondary Occupational Skill Training

Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
PUBLIC SERVICE



Developed by: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
PUBLIC SERVICE

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options Aft Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

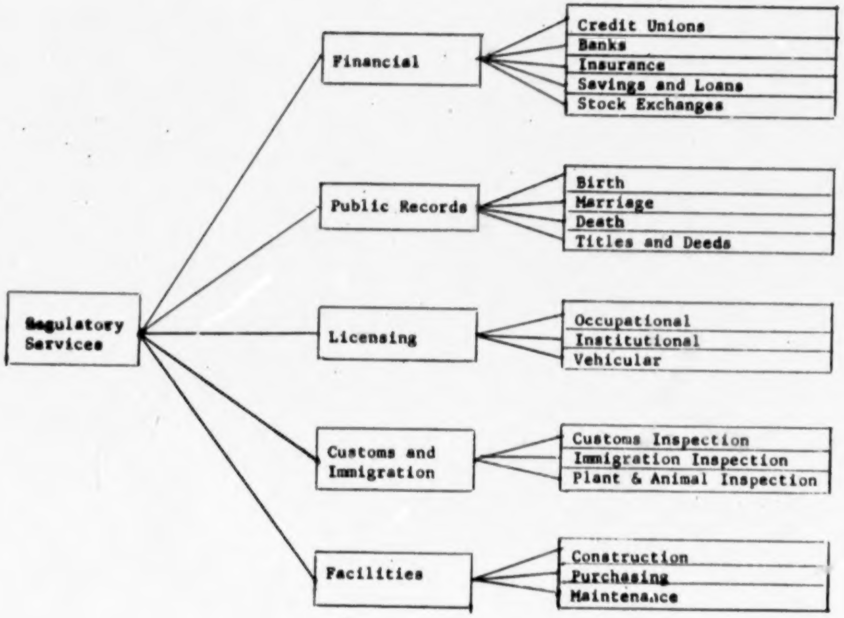
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

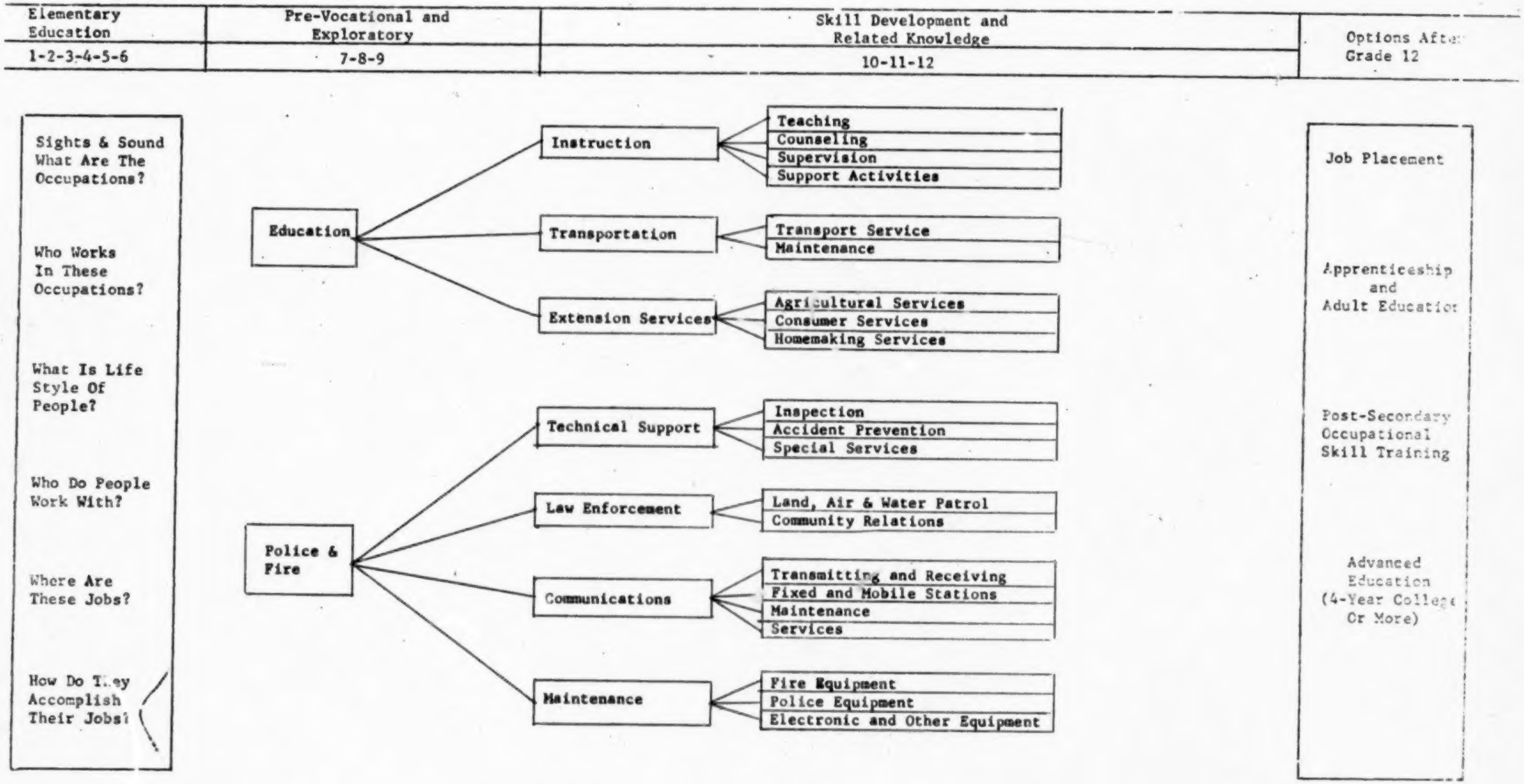
Apprenticeship and Adult Educatio

Post-Secondary Occupational Skill Training

Advanced Education (4-Year Colleg Or More)

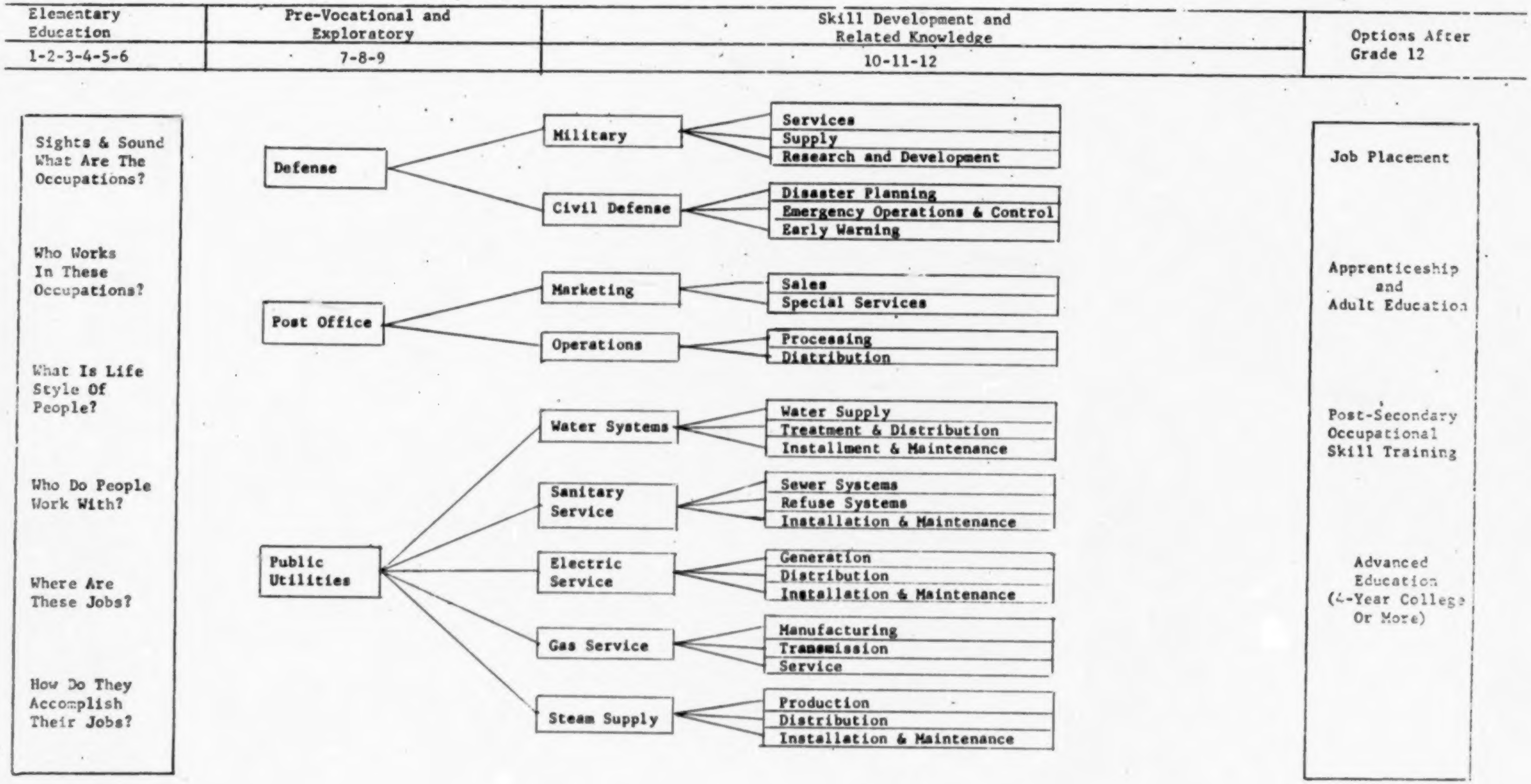
Developed by: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
PUBLIC SERVICE



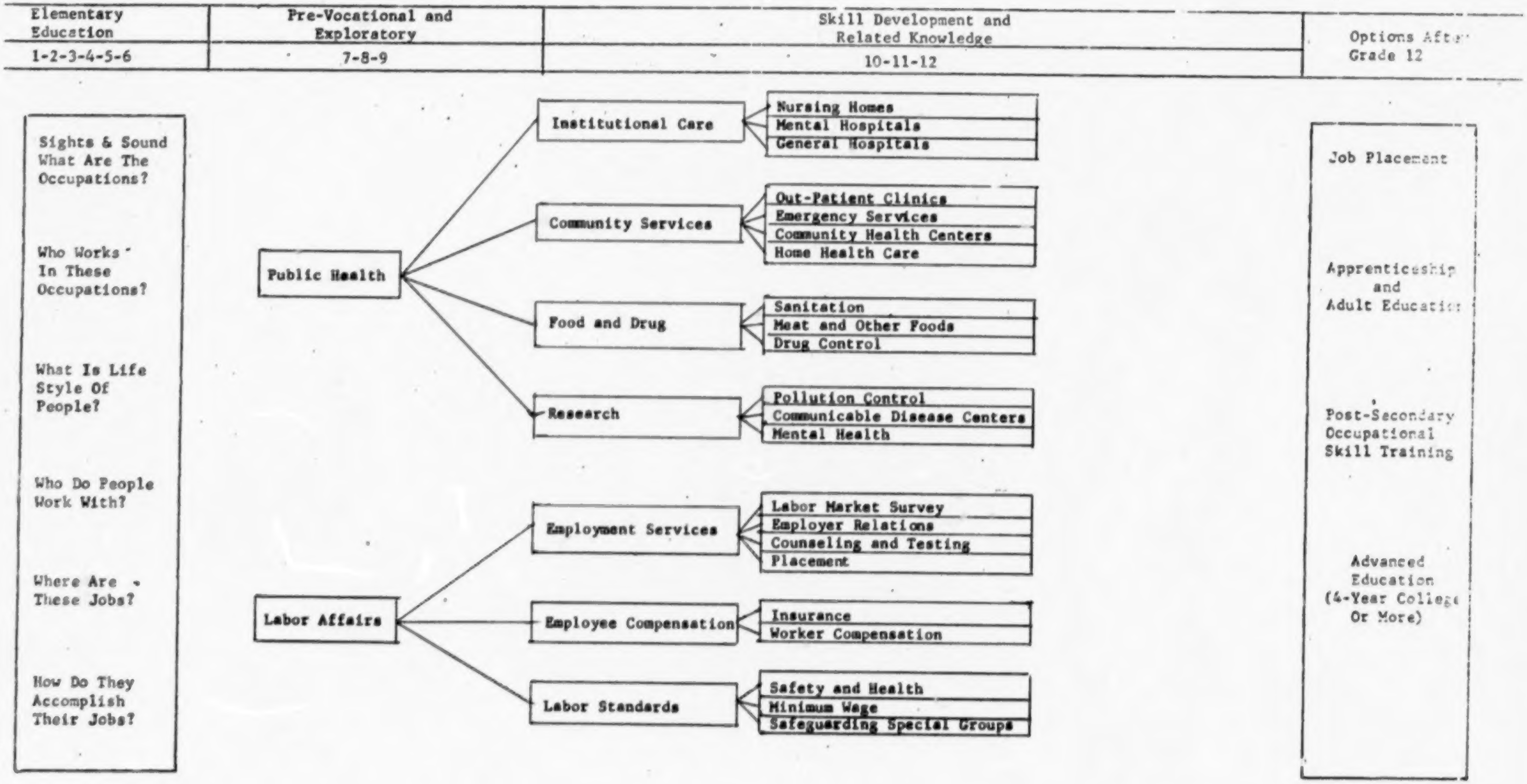
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
PUBLIC SERVICE



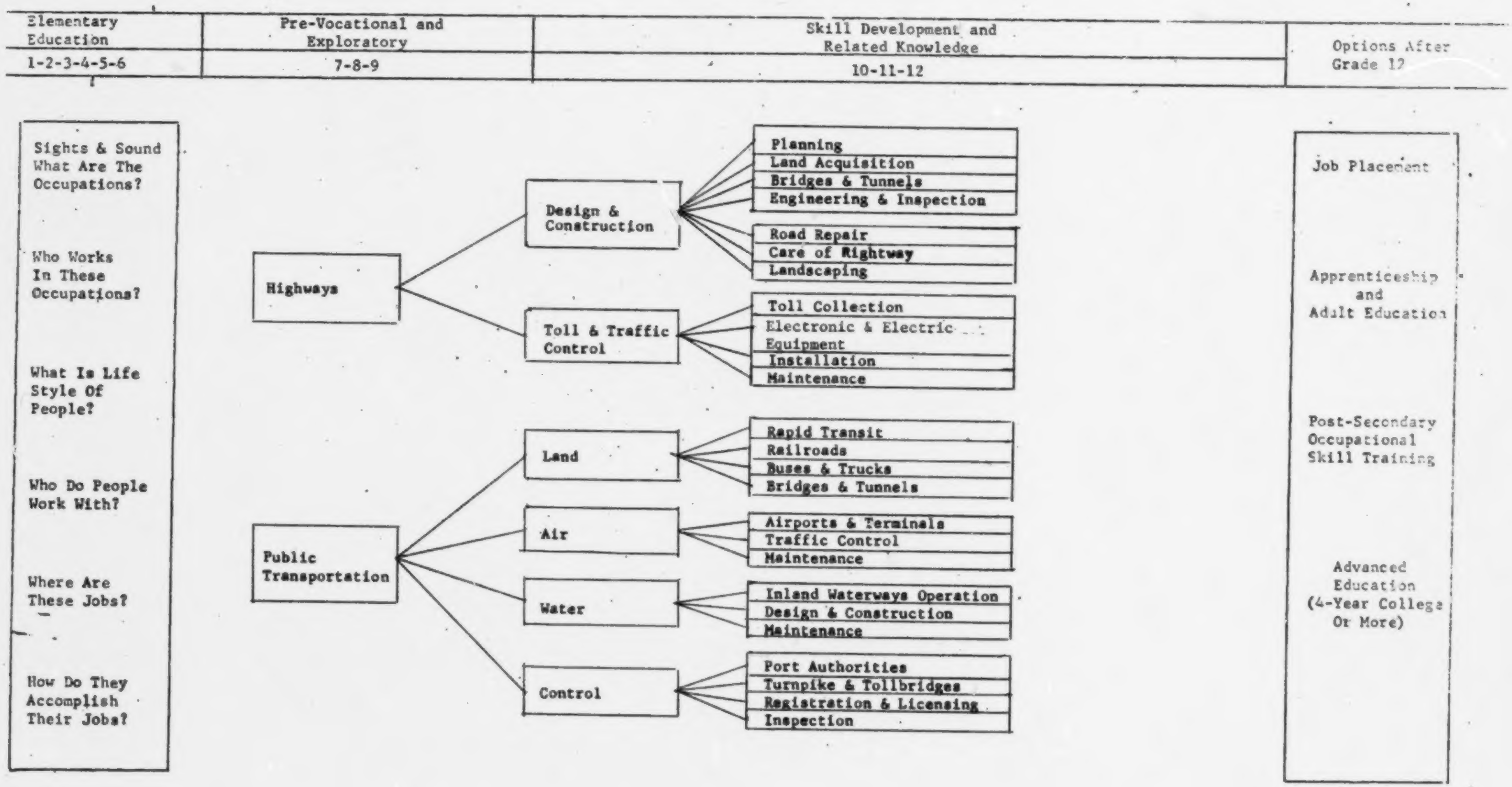
Developed by: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for PUBLIC SERVICE



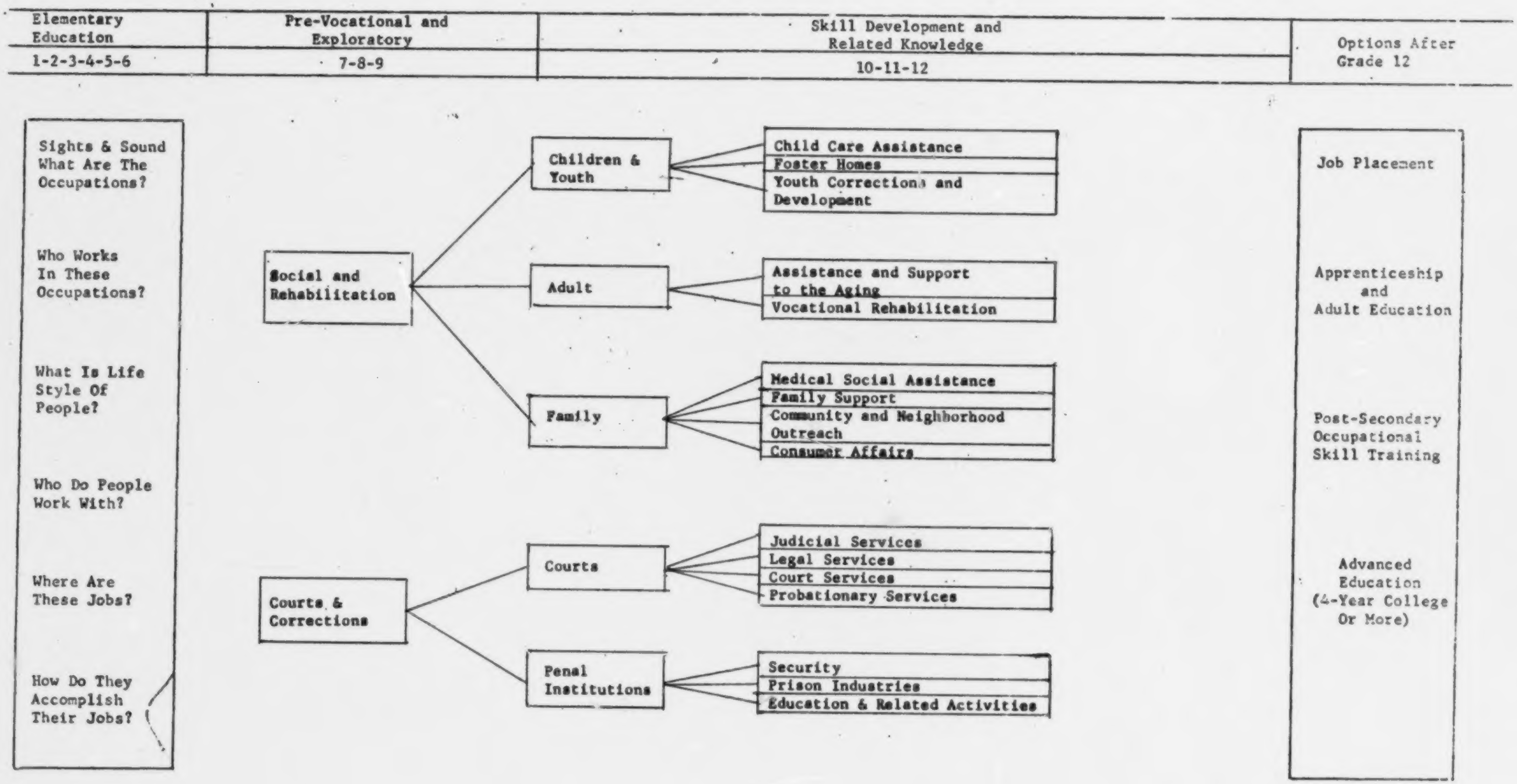
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-7[illegible]

Cluster for
PUBLIC SERVICE



Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

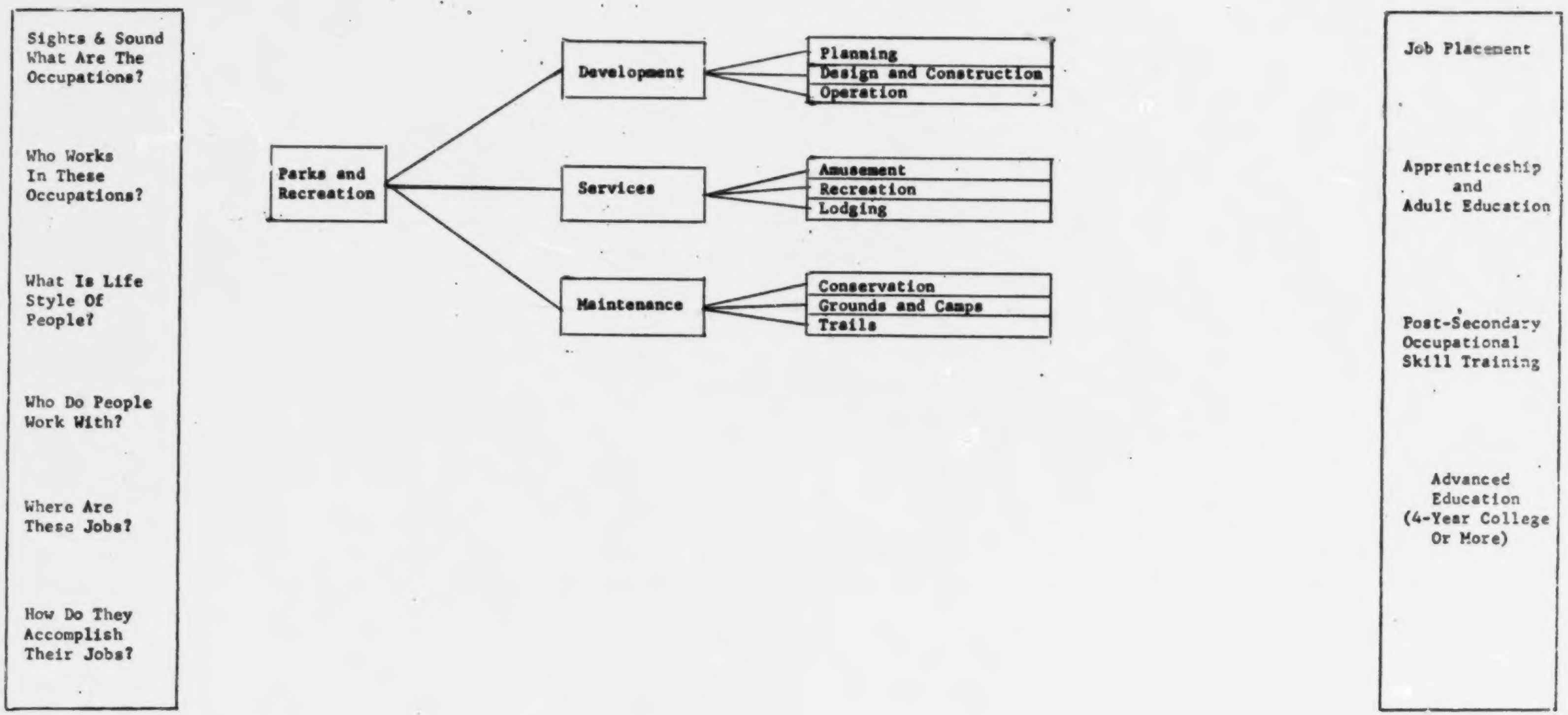
Cluster for
PUBLIC SERVICE


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Social and Rehabilitation
Courts & Corrections
Children & Youth
Adult
Family
Courts
Penal Institutions
Child Care Assistance
Foster Homes
Youth Corrections and Development
Assistance and Support to the Aging
Vocational Rehabilitation
Medical Social Assistance
Family Support
Community and Neighborhood Outreach
Consumer Affairs
Judicial Services
Legal Services
Court Services
Probationary Services
Security
Prison Industries
Education & Related Activities
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
PUBLIC SERVICE

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Parks and Recreation
Development
Services
Maintenance
Planning
Design and Construction
Operation
Amusement
Recreation
Lodging
Conservation
Grounds and Camps
Trails
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
MARINE SCIENCE OCCUPATIONS

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound
What Are The
Occupations?

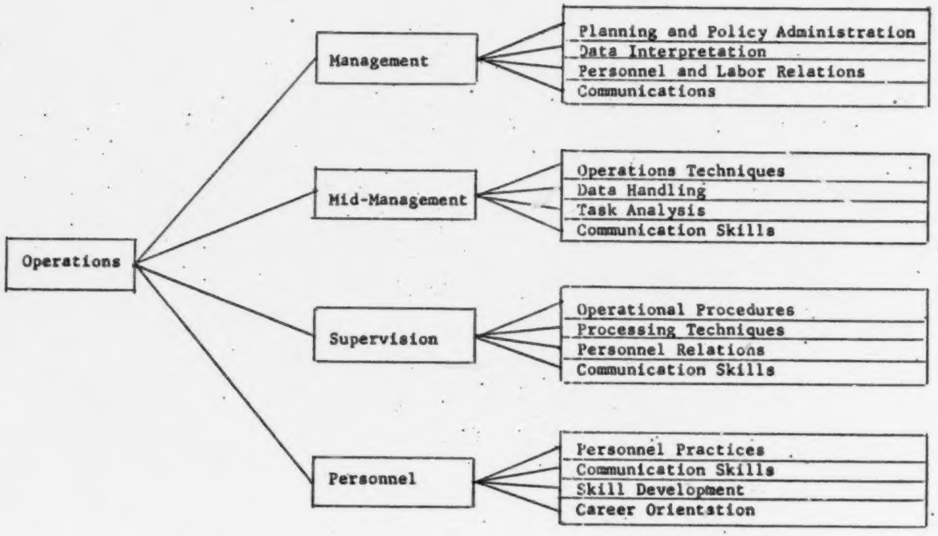
Who Works
In These
Occupations?

What Is Life
Style Of
People?

Who Do People
Work With?

Where Are
These Jobs?

How Do They
Accomplish
Their Jobs?



Job Placement

Apprenticeship
and
Adult Education

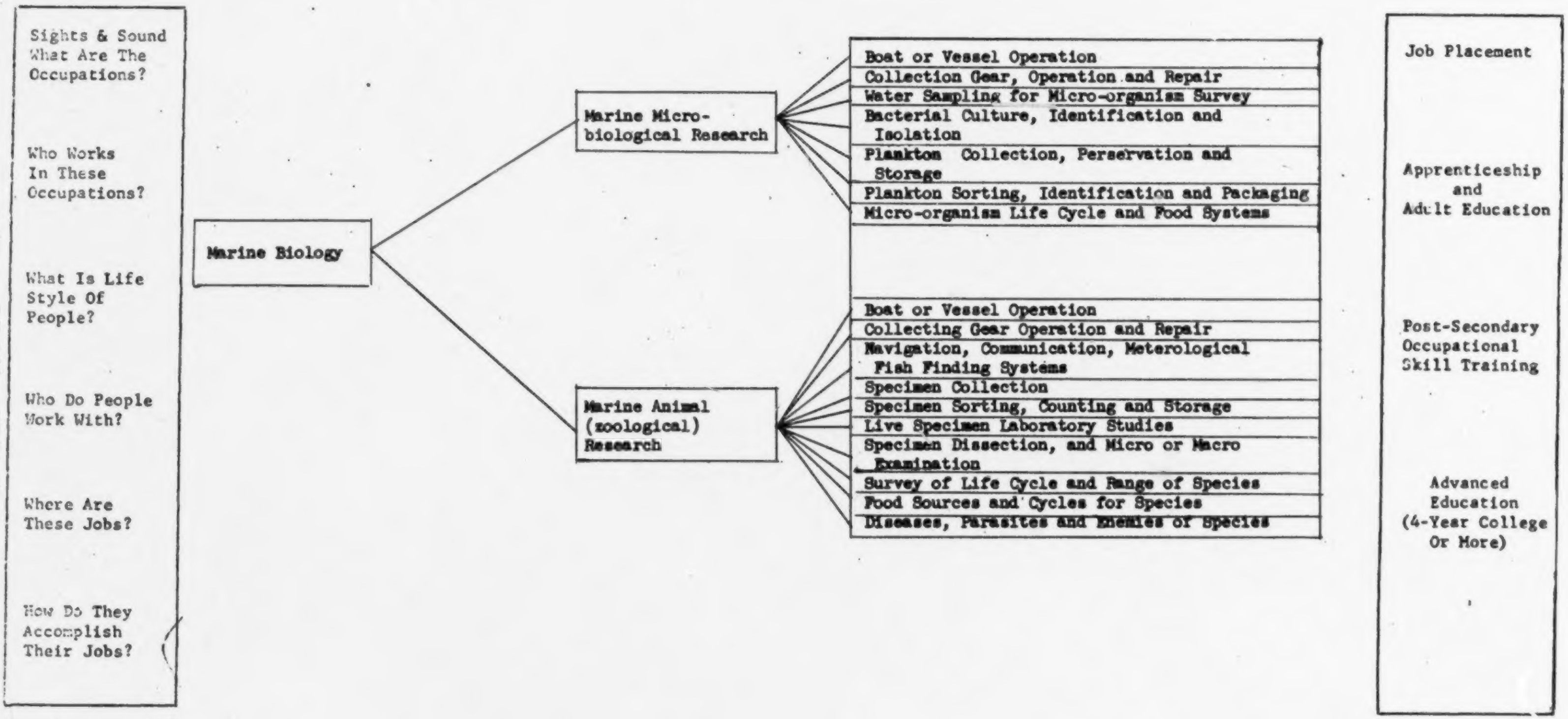
Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for Marine Science Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Sights & Sound What Are The Occupations?

Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?

Marine Biology

Marine Micro-biological Research

- Boat or Vessel Operation
- Collection Gear, Operation and Repair
- Water Sampling for Micro-organism Survey
- Bacterial Culture, Identification and Isolation
- Plankton Collection, Perservation and Storage
- Plankton Sorting, Identification and Packaging
- Micro-organism Life Cycle and Food Systems

Marine Animal (zoological) Research

- Boat or Vessel Operation
- Collecting Gear Operation and Repair
- Navigation, Communication, Meterological Fish Finding Systems
- Specimen Collection
- Specimen Sorting, Counting and Storage
- Live Specimen Laboratory Studies
- Specimen Dissection, and Micro or Macro Examination
- Survey of Life Cycle and Range of Species
- Food Sources and Cycles for Species
- Diseases, Parasites and Enemies of Species

Job Placement

Apprenticeship and Adult Education

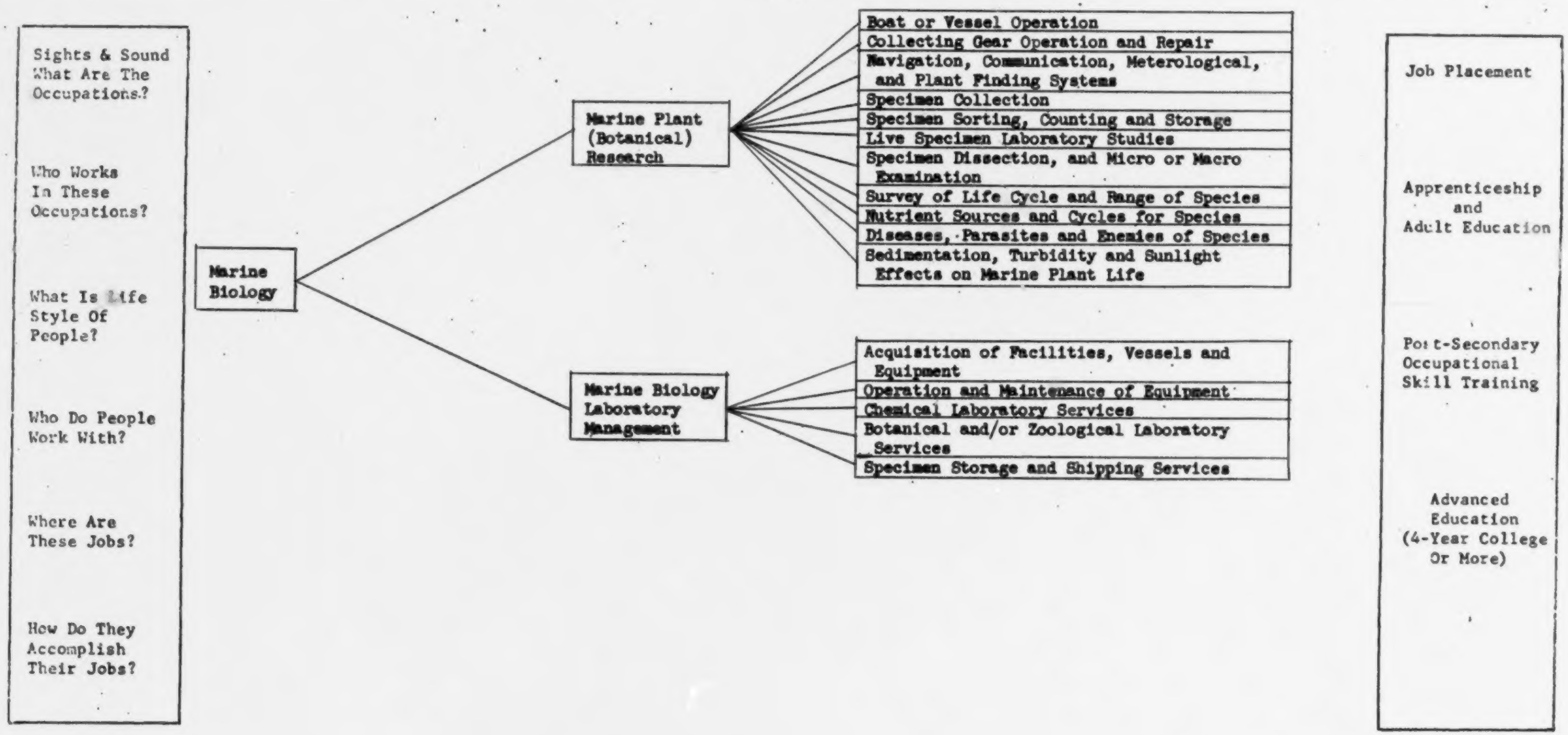
Post-Secondary Occupational Skill Training

Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 411/71

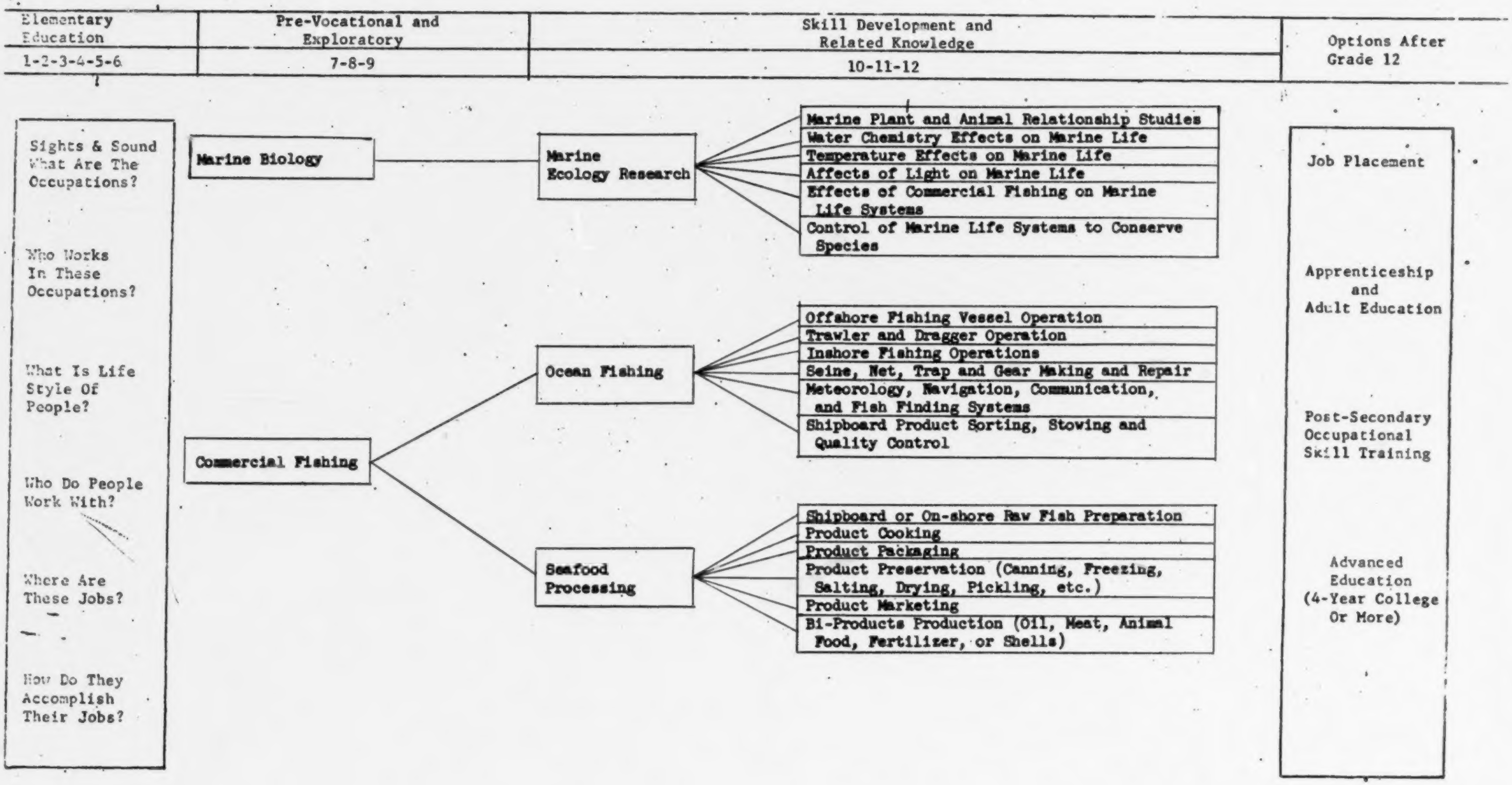
Cluster for Marine Science Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Marine Biology
Marine Plant (Botanical) Research
Marine Biology Laboratory Management
Boat or Vessel Operation
Collecting Gear Operation and Repair
Navigation, Communication, Meterological, and Plant Finding Systems
Specimen Collection
Specimen Sorting, Counting and Storage
Live Specimen Laboratory Studies
Specimen Dissection, and Micro or Macro Examination
Survey of Life Cycle and Range of Species
Nutrient Sources and Cycles for Species
Diseases, Parasites and Enemies of Species
Sedimentation, Turbidity and Sunlight Effects on Marine Plant Life
Acquisition of Facilities, Vessels and Equipment
Operation and Maintenance of Equipment
Chemical Laboratory Services
Botanical and/or Zoological Laboratory Services
Specimen Storage and Shipping Services
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

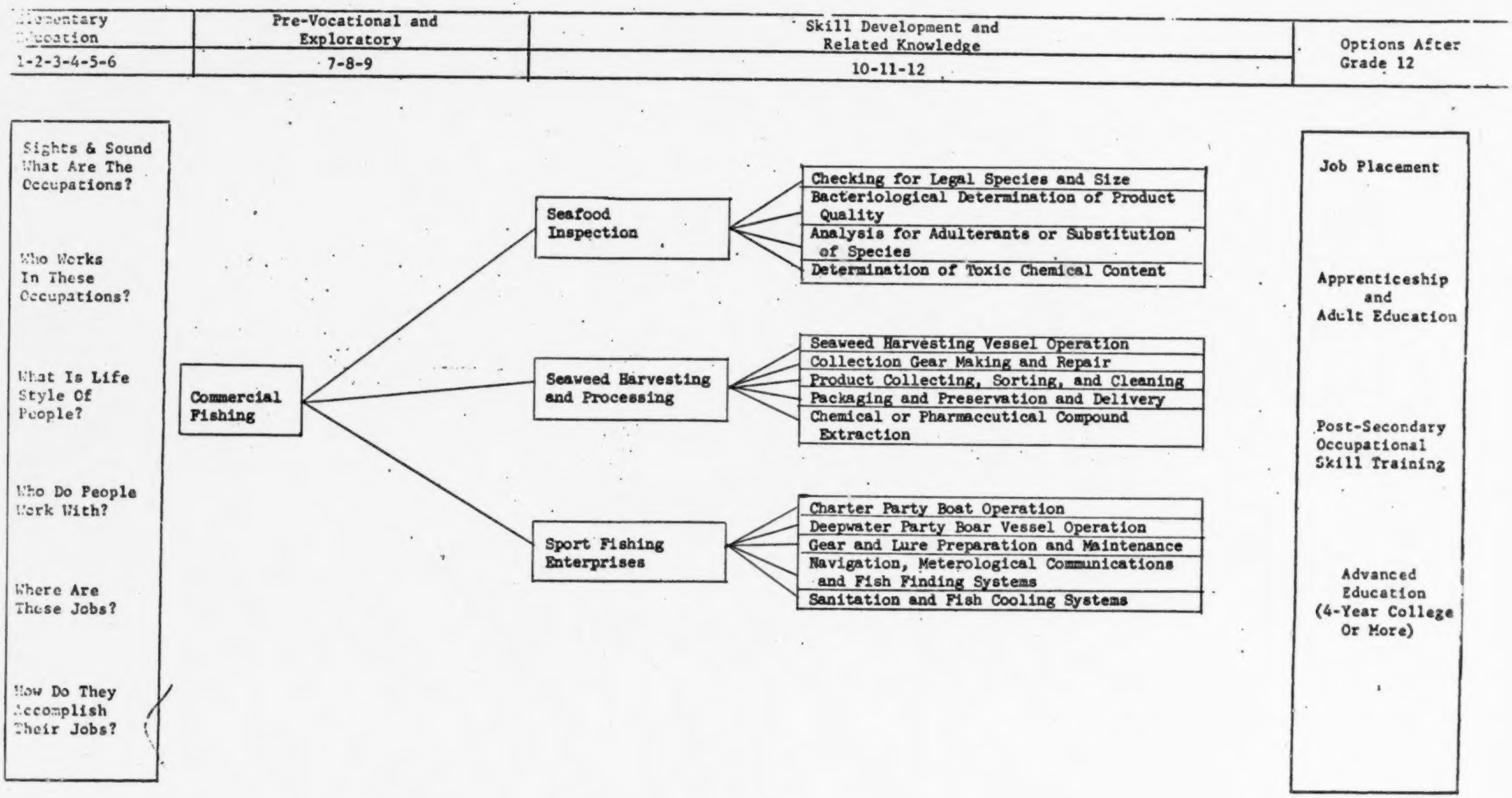
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for Marine Science Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Marine Biology
Commercial Fishing
Marine Ecology Research
Ocean Fishing
Seafood Processing
Marine Plant and Animal Relationship Studies
Water Chemistry Effects on Marine Life
Temperature Effects on Marine Life
Affects of Light on Marine Life
Effects of Commercial Fishing on Marine Life Systems
Control of Marine Life Systems to Conserve Species
Offshore Fishing Vessel Operation
Trawler and Dragger Operation
Inshore Fishing Operations
Seine, Net, Trap and Gear Making and Repair
Meteorology, Navigation, Communication, and Fish Finding Systems
Shipboard Product Sorting, Stowing and Quality Control
Shipboard or On-shore Raw Fish Preparation
Product Cooking
Product Packaging
Product Preservation (Canning, Freezing, Salting, Drying, Pickling, etc.)
Product Marketing
Bi-Products Production (Oil, Meat, Animal Food, Fertilizer, or Shells)
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

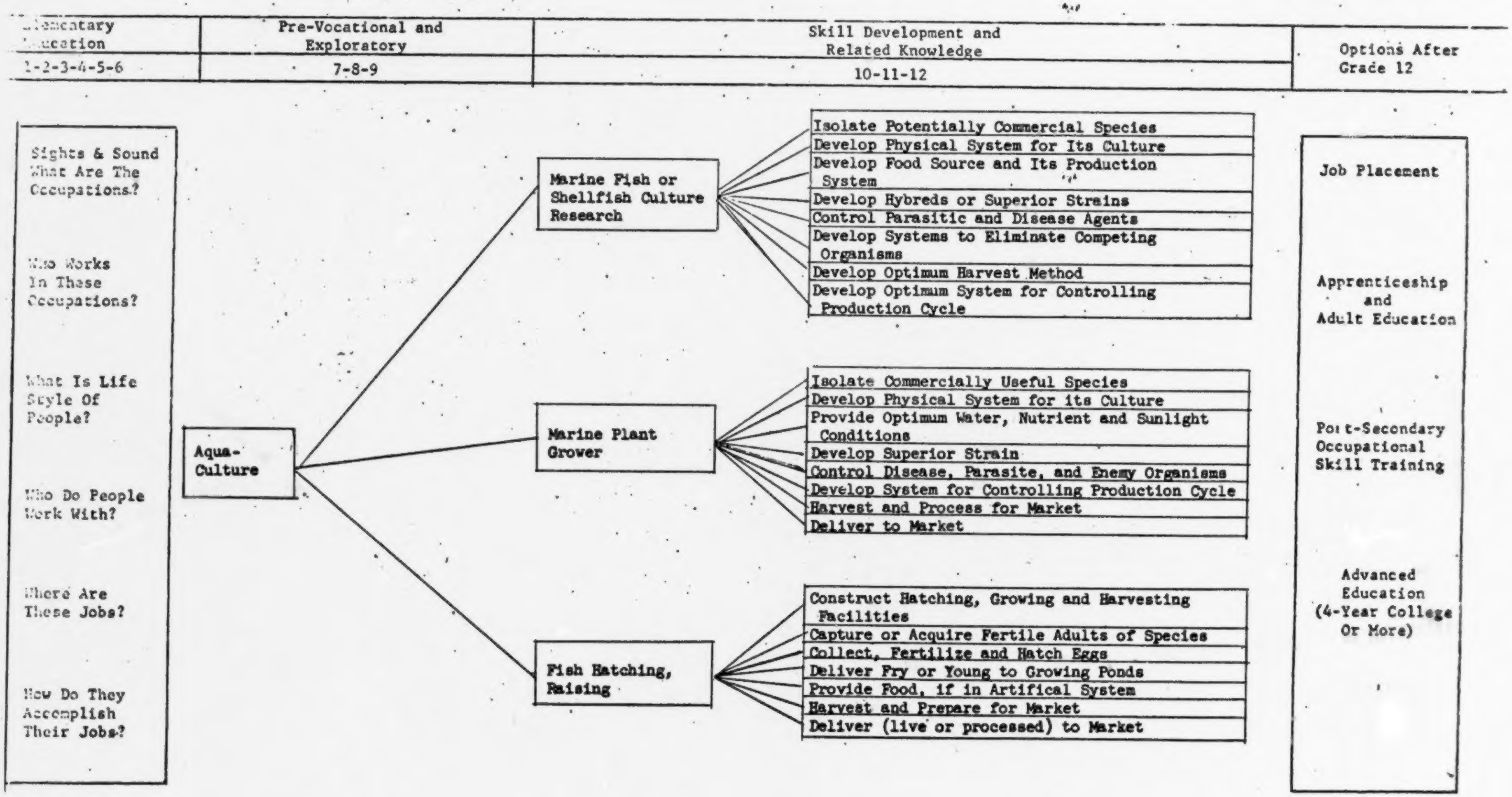
Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for Marine Science Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Commercial Fishing
Seafood Inspection
Seaweed Harvesting and Processing
Sport Fishing Enterprises
Checking for Legal Species and Size
Bacteriological Determination of Product Quality
Analysis for Adulterants or Substitution of Species
Determination of Toxic Chemical Content
Seaweed Harvesting Vessel Operation
Collection Gear Making and Repair
Product Collecting, Sorting, and Cleaning
Packaging and Preservation and Delivery
Chemical or Pharmaccutical Compound Extraction
Charter Party Boat Operation
Deepwater Party Boar Vessel Operation
Gear and Lure Preparation and Maintenance
Navigation, Meterological Communications and Fish Finding Systems
Sanitation and Fish Cooling Systems
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

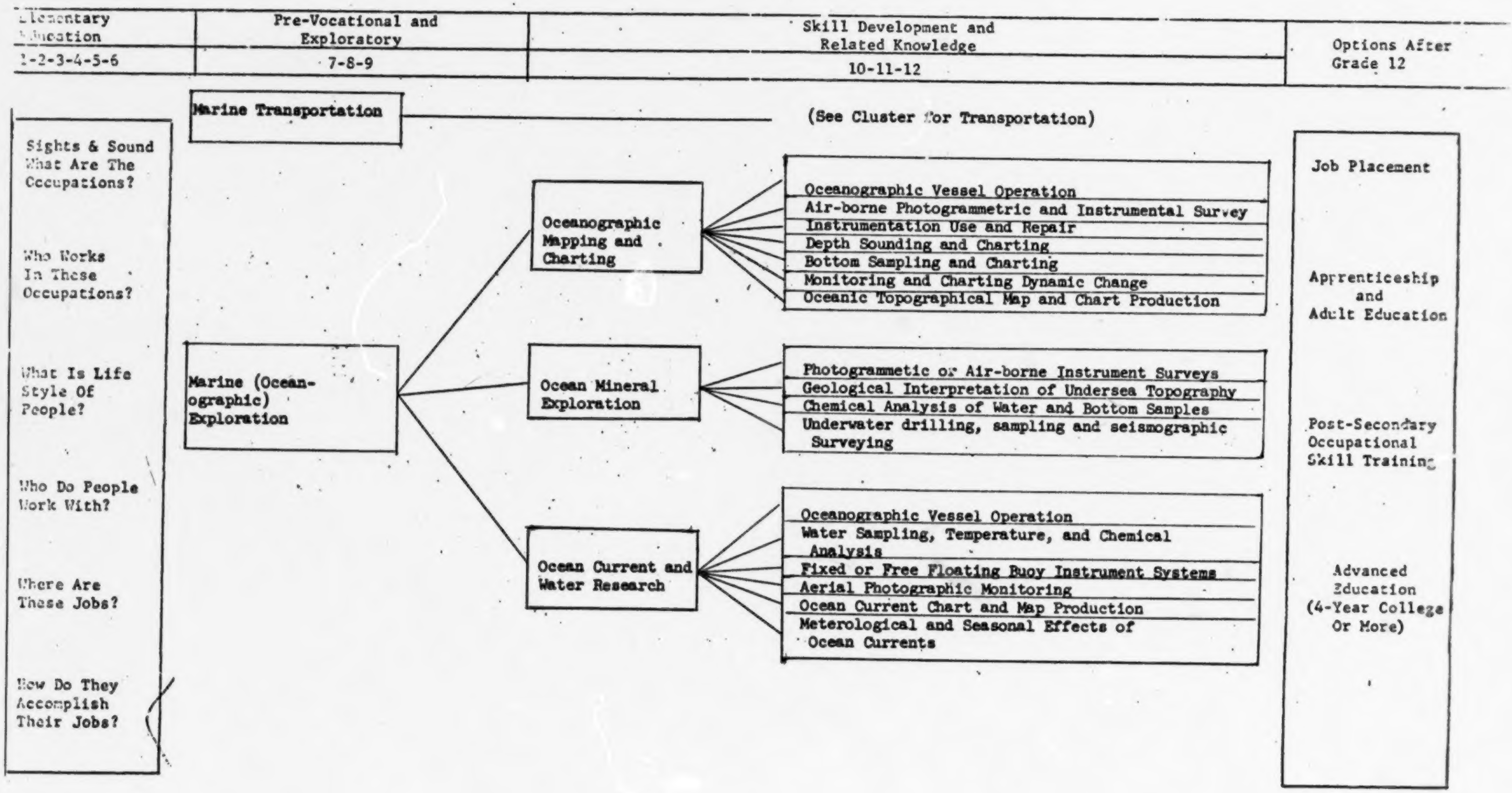
Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for Marine Science Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Aqua-Culture
Marine Fish or Shellfish Culture Research
Isolate Potentially Commercial Species
Develop Physical System for Its Culture
Develop Food Source and Its Production System
Develop Hybreds or Superior Strains
Control Parasitic and Disease Agents
Develop Systems to Eliminate Competing Organisms
Develop Optimum Harvest Method
Develop Optimum System for Controlling Production Cycle
Marine Plant Grower
Isolate Commercially Useful Species
Develop Physical System for its Culture
Provide Optimum Water, Nutrient and Sunlight Conditions
Develop Superior Strain
Control Disease, Parasite, and Enemy Organisms
Develop System for Controlling Production Cycle
Harvest and Process for Market
Deliver to Market
Fish Hatching, Raising
Construct Hatching, Growing and Harvesting Facilities
Capture or Acquire Fertile Adults of Species
Collect, Fertilize and Hatch Eggs
Deliver Fry or Young to Growing Ponds
Provide Food, if in Artifical System
Harvest and Prepare for Market
Deliver (live or processed) to Market
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

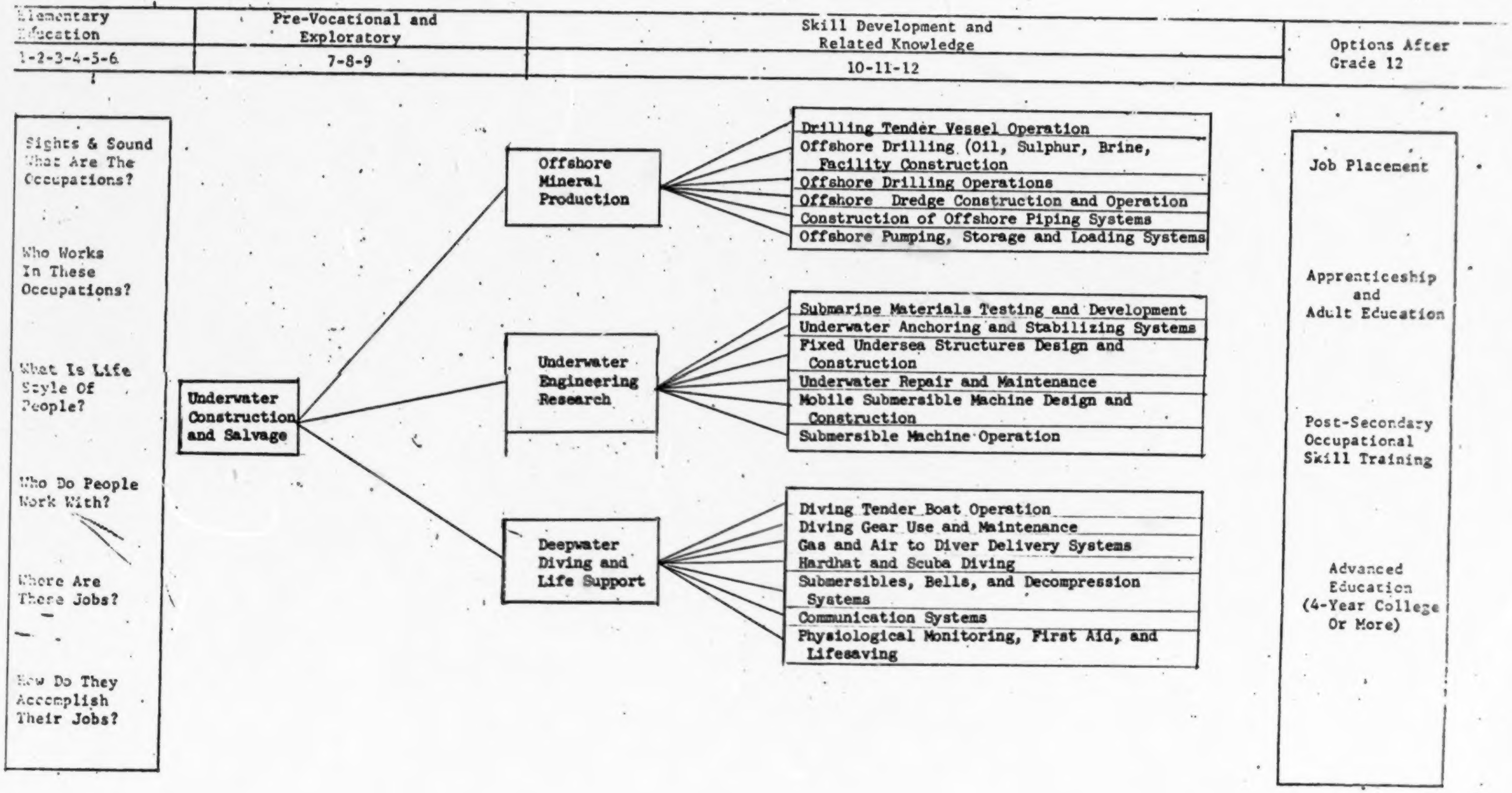
Cluster for Marine Science Occupations



Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Marine Transportation
(See Cluster for Transportation)
Marine (Oceanographic) Exploration
Oceanographic Mapping and Charting
Ocean Mineral Exploration
Ocean Current and Water Research
Oceanographic Vessel Operation
Air-borne Photogrammetric and Instrumental Survey
Instrumentation Use and Repair
Depth Sounding and Charting
Bottom Sampling and Charting
Monitoring and Charting Dynamic Change
Oceanic Topographical Map and Chart Production
Photogrammetic or Air-borne Instrument Surveys
Geological Interpretation of Undersea Topography
Chemical Analysis of Water and Bottom Samples
Underwater drilling, sampling and seismographic Surveying
Oceanographic Vessel Operation
Water Sampling, Temperature, and Chemical Analysis
Fixed or Free Floating Buoy Instrument Systems
Aerial Photographic Monitoring
Ocean Current Chart and Map Production
Meterological and Seasonal Effects of Ocean Currents
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

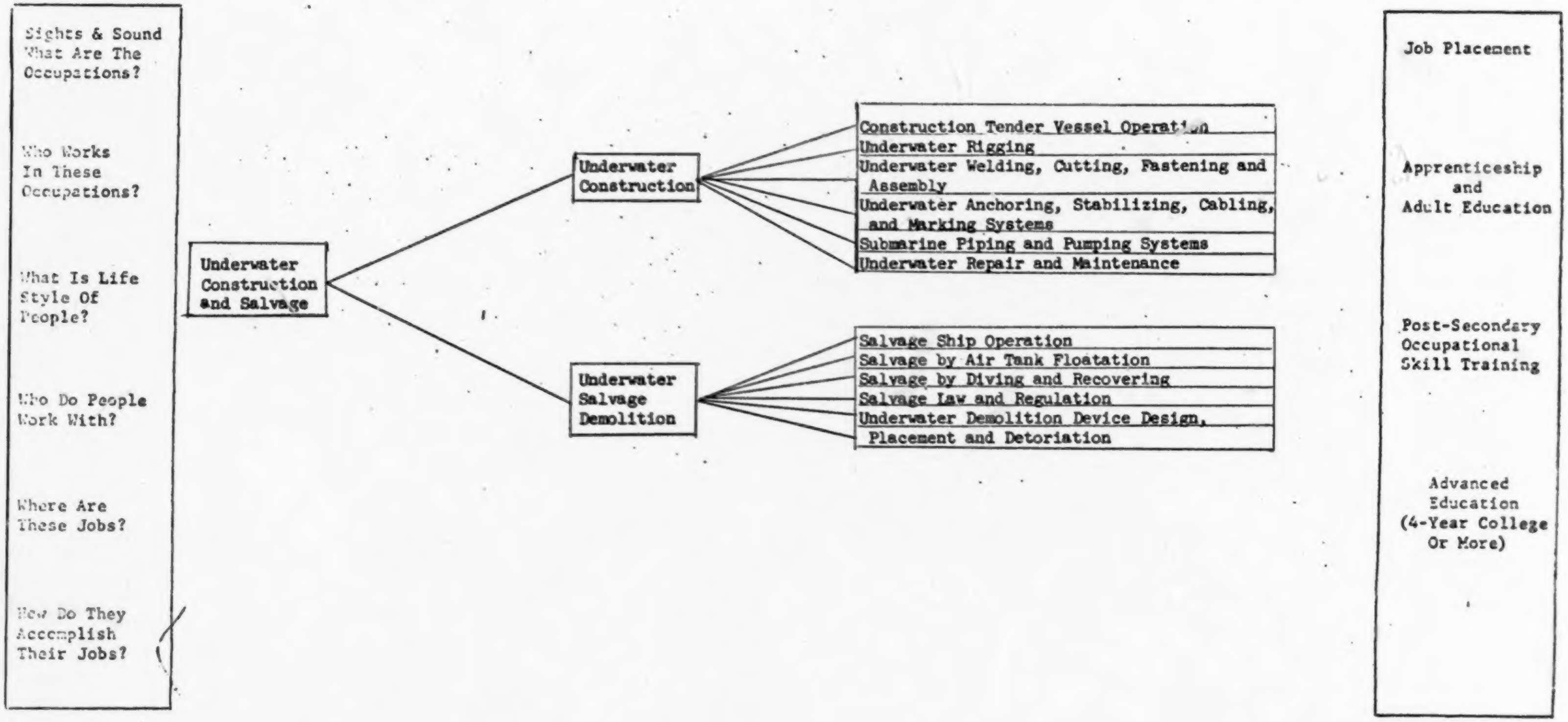
Cluster for Marine Science Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are There Jobs?
How Do They Accomplish Their Jobs?
Underwater Construction and Salvage
Offshore Mineral Production
Underwater Engineering Research
Deepwater Diving and Life Support
Drilling Tender Vessel Operation
Offshore Drilling (Oil, Sulphur, Brine, Facility Construction
Offshore Drilling Operations
Offshore Dredge Construction and Operation
Construction of Offshore Piping Systems
Offshore Pumping, Storage and Loading Systems
Submarine Materials Testing and Development
Underwater Anchoring and Stabilizing Systems
Fixed Undersea Structures Design and Construction
Underwater Repair and Maintenance
Mobile Submersible Machine Design and Construction
Submersible Machine Operation
Diving Tender Boat Operation
Diving Gear Use and Maintenance
Gas and Air to Diver Delivery Systems
Hardhat and Scuba Diving
Submersibles, Bells, and Decompression Systems
Communication Systems
Physiological Monitoring, First Aid, and Lifesaving
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for Marine Science Occupations

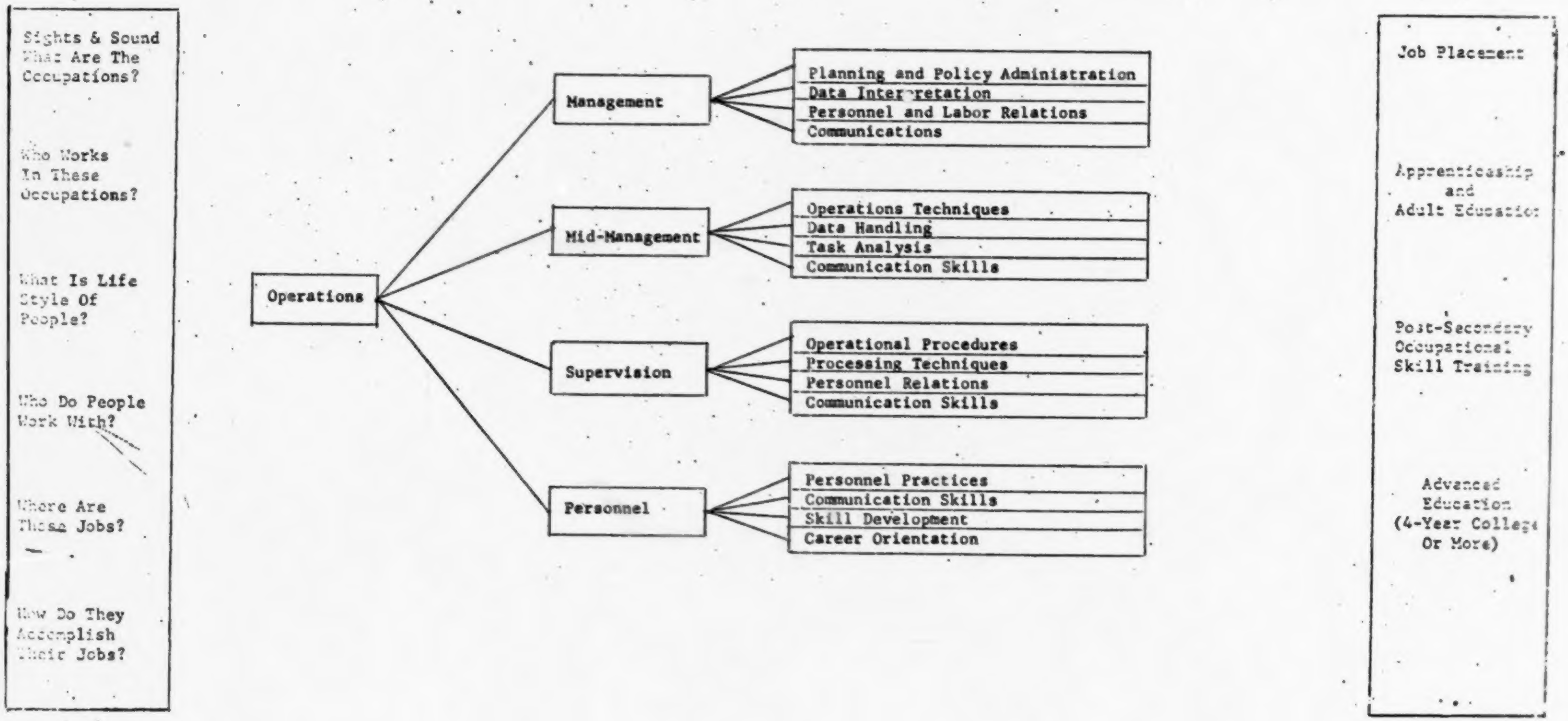
mentary cation	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Underwater Construction and Salvage
Underwater Construction
Underwater Salvage Demolition
Construction Tender Vessel Operation
Underwater Rigging
Underwater Welding, Cutting, Fastening and Assembly
Underwater Anchoring, Stabilizing, Cabling, and Marking Systems
Submarine Piping and Pumping Systems
Underwater Repair and Maintenance
Salvage Ship Operation
Salvage by Air Tank Floatation
Salvage by Diving and Recovering
Salvage Law and Regulation
Underwater Demolition Device Design, Placement and Detoriation
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
ENVIRONMENT

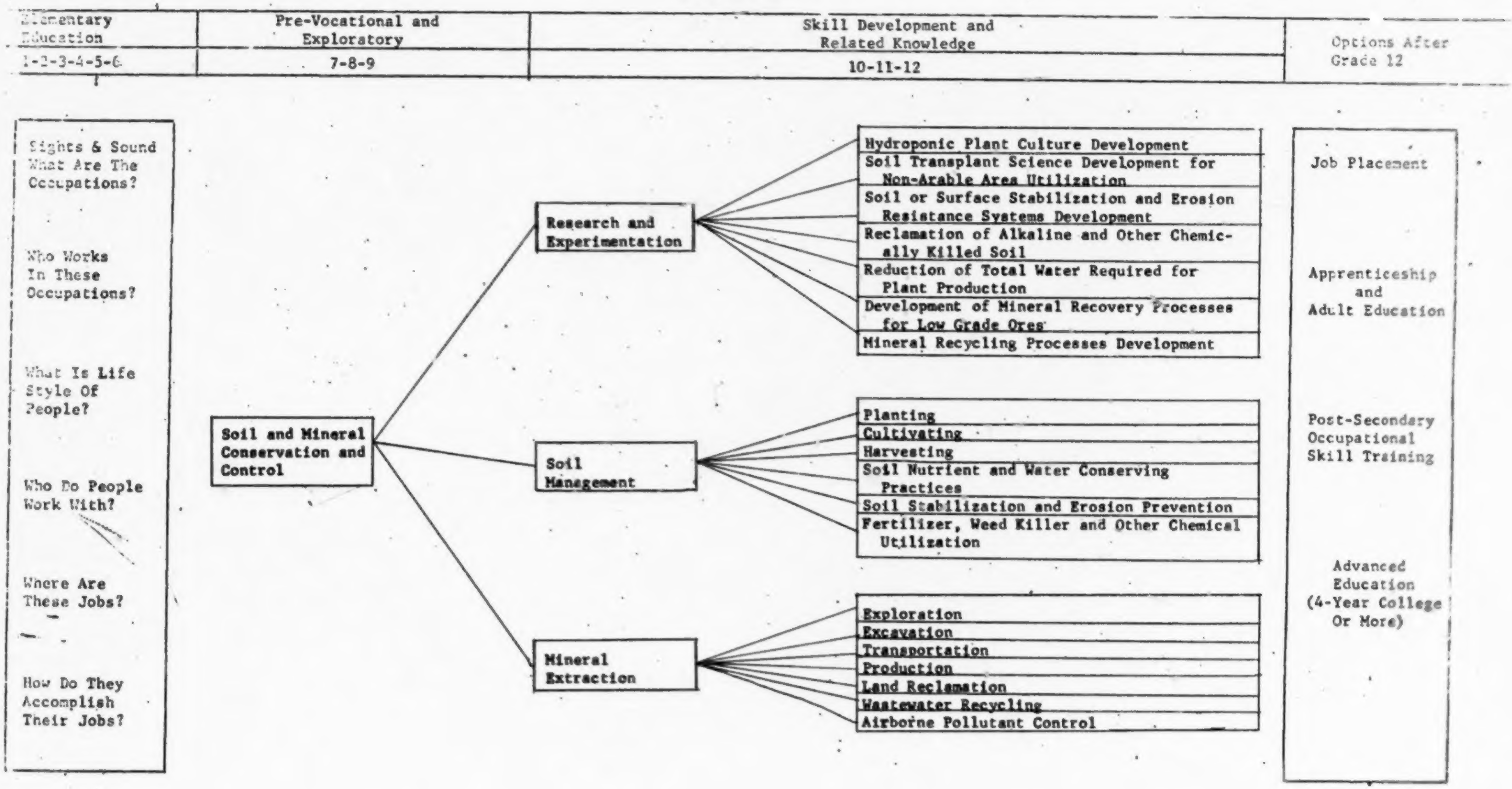
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Developed By: USOE/DVTE
Draft
Revised
DATE 4/4/71

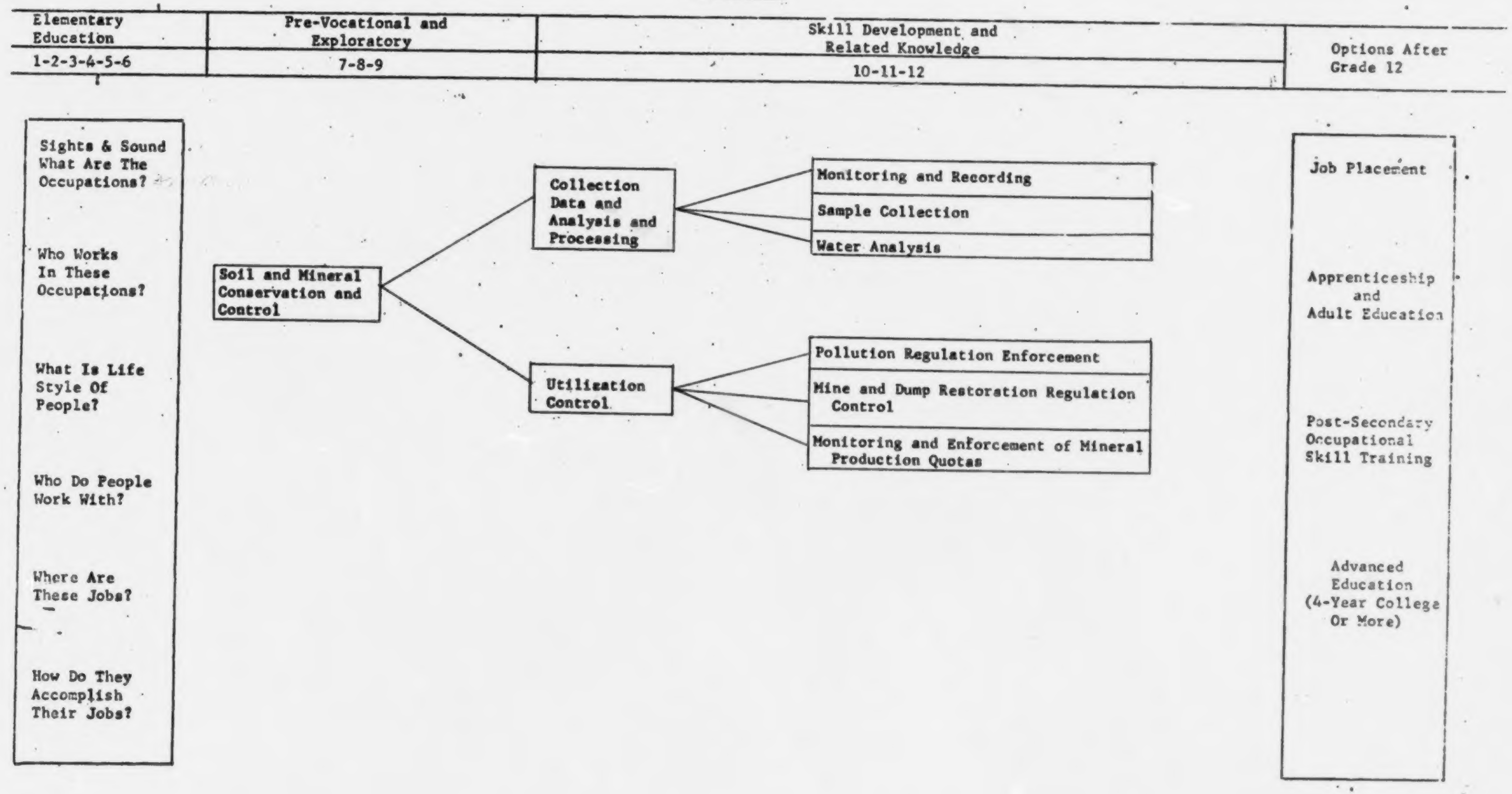
Cluster for

Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Soil and Mineral Conservation and Control
Research and Experimentation
Soil Management
Mineral Extraction
Hydroponic Plant Culture Development
Soil Transplant Science Development for Non-Arable Area Utilization
Soil or Surface Stabilization and Erosion Resistance Systems Development
Reclamation of Alkaline and Other Chemically Killed Soil
Reduction of Total Water Required for Plant Production
Development of Mineral Recovery Processes for Low Grade Ores
Mineral Recycling Processes Development
Planting
Cultivating
Harvesting
Soil Nutrient and Water Conserving Practices
Soil Stabilization and Erosion Prevention
Fertilizer, Weed Killer and Other Chemical Utilization
Exploration
Excavation
Transportation
Production
Land Reclamation
Wastewater Recycling
Airborne Pollutant Control
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

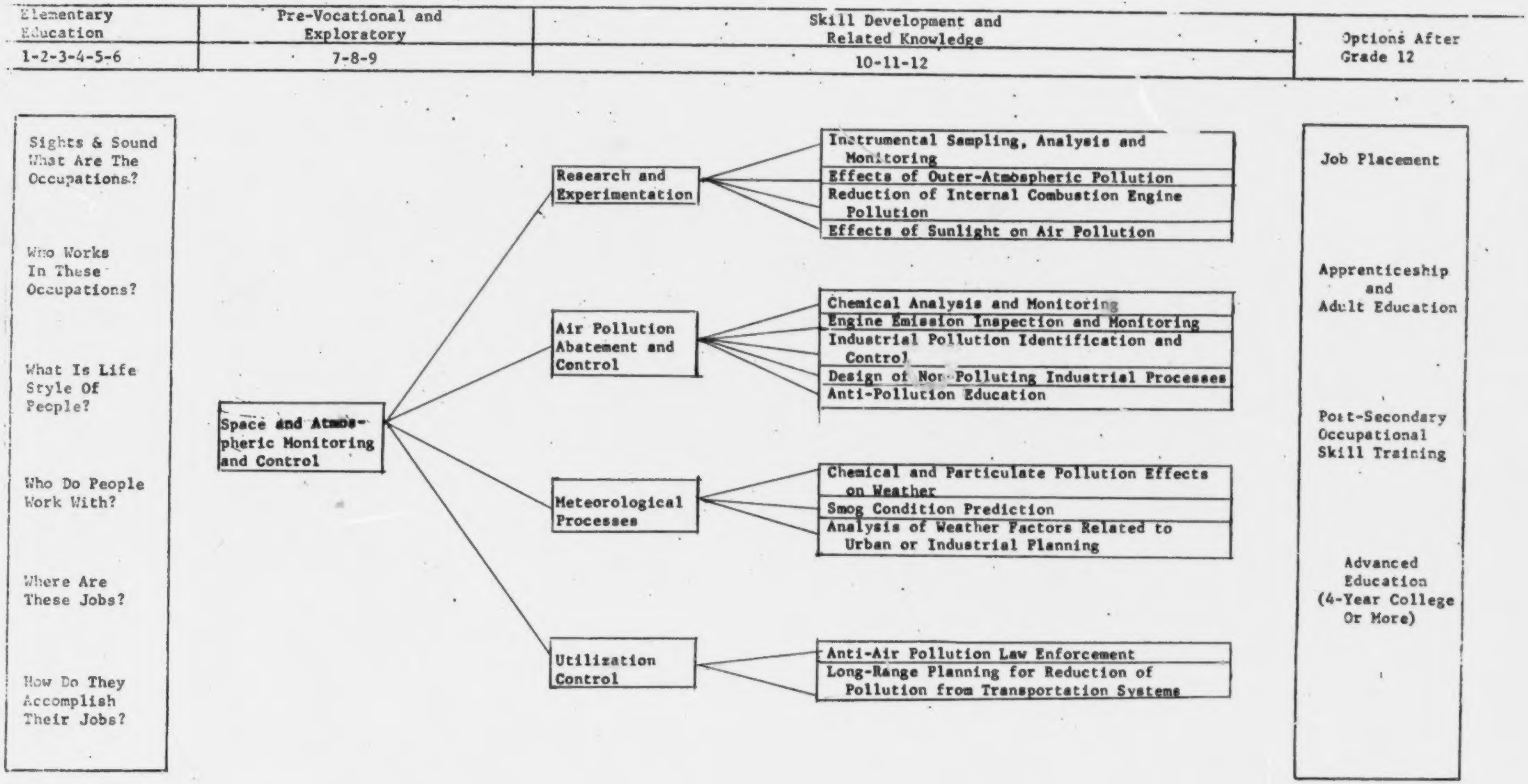
Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Soil and Mineral Conservation and Control
Collection Data and Analysis and Processing
Utilization Control
Monitoring and Recording
Sample Collection
Water Analysis
Pollution Regulation Enforcement
Mine and Dump Restoration Regulation Control
Monitoring and Enforcement of Mineral Production Quotas
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

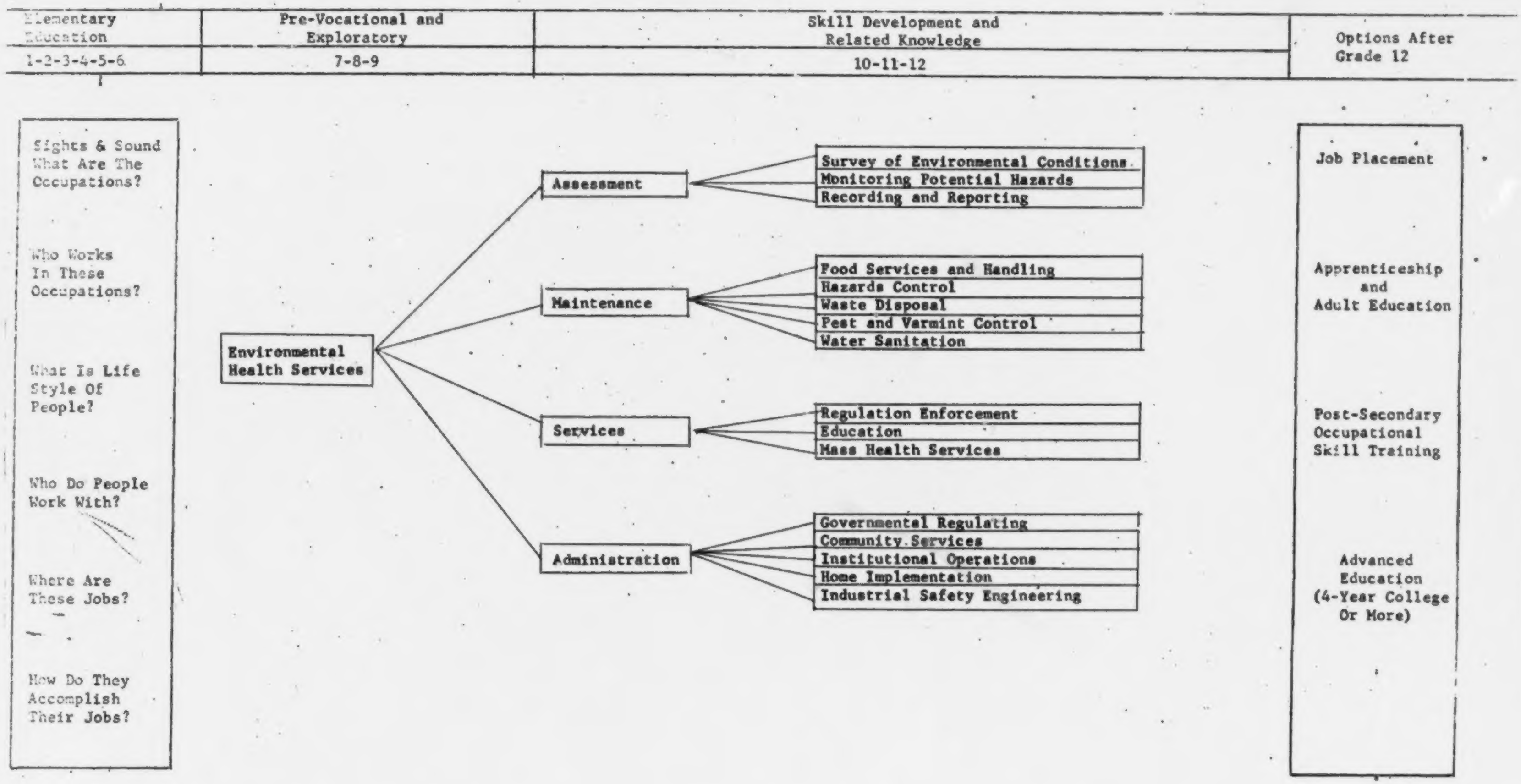
Cluster for
Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Space and Atmospheric Monitoring and Control
Research and Experimentation
Instrumental Sampling, Analysis and Monitoring
Effects of Outer-Atmospheric Pollution
Reduction of Internal Combustion Engine Pollution
Effects of Sunlight on Air Pollution
Air Pollution Abatement and Control
Chemical Analysis and Monitoring
Engine Emission Inspection and Monitoring
Industrial Pollution Identification and Control
Design of Non-Polluting Industrial Processes
Anti-Pollution Education
Meteorological Processes
Chemical and Particulate Pollution Effects on Weather
Smog Condition Prediction
Analysis of Weather Factors Related to Urban or Industrial Planning
Utilization Control
Anti-Air Pollution Law Enforcement
Long-Range Planning for Reduction of Pollution from Transportation Systems
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

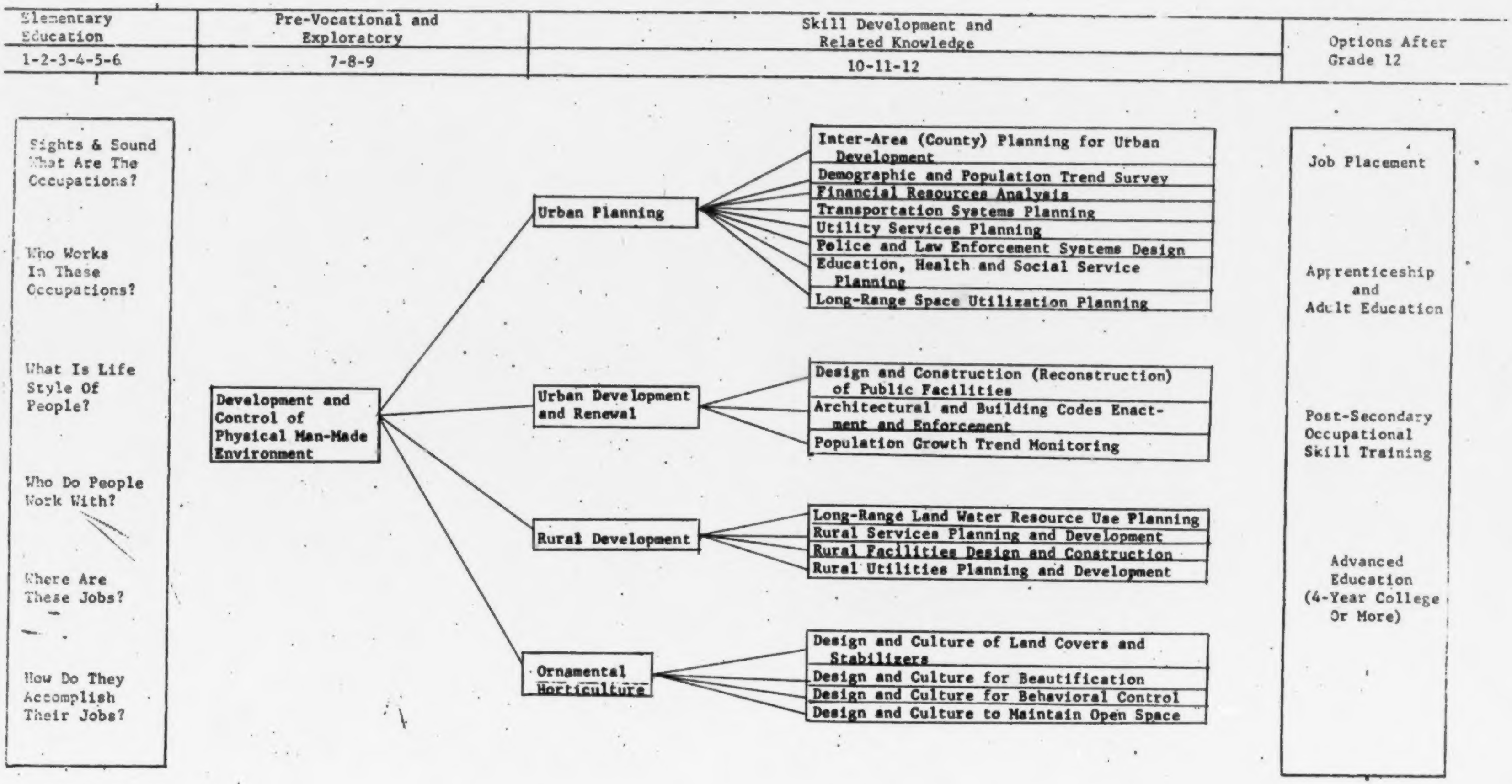
Cluster for

Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Environmental Health Services
Assessment
Maintenance
Services
Administration
Survey of Environmental Conditions
Monitoring Potential Hazards
Recording and Reporting
Food Services and Handling
Hazards Control
Waste Disposal
Pest and Varmint Control
Water Sanitation
Regulation Enforcement
Education
Mass Health Services
Governmental Regulating
Community Services
Institutional Operations
Home Implementation
Industrial Safety Engineering
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

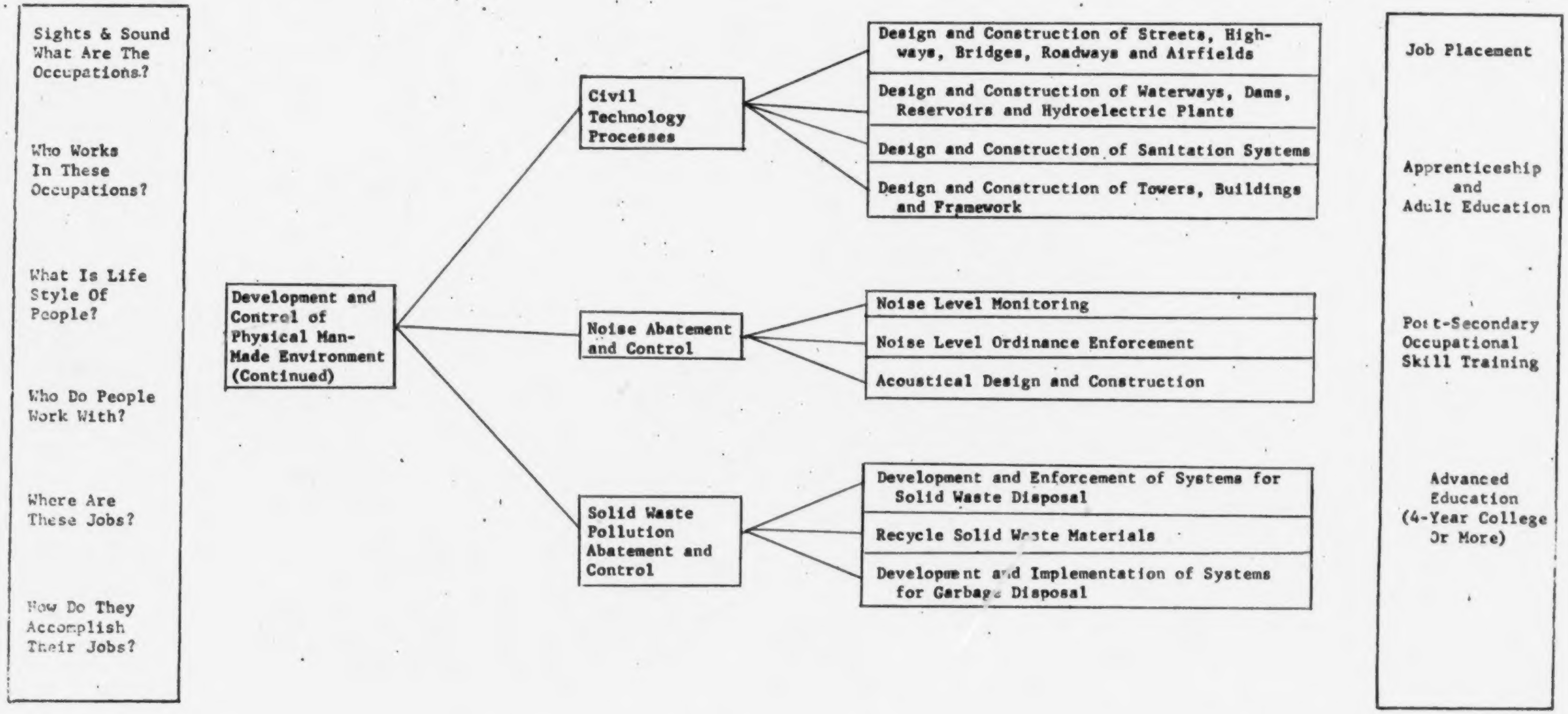
Cluster for
Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Development and Control of Physical Man-Made Environment
Urban Planning
Inter-Area (County) Planning for Urban Development
Demographic and Population Trend Survey
Financial Resources Analysis
Transportation Systems Planning
Utility Services Planning
Police and Law Enforcement Systems Design
Education, Health and Social Service Planning
Long-Range Space Utilization Planning
Urban Development and Renewal
Design and Construction (Reconstruction) of Public Facilities
Architectural and Building Codes Enactment and Enforcement
Population Growth Trend Monitoring
Rural Development
Long-Range Land Water Resource Use Planning
Rural Services Planning and Development
Rural Facilities Design and Construction
Rural Utilities Planning and Development
Ornamental Horticulture
Design and Culture of Land Covers and Stabilizers
Design and Culture for Beautification
Design and Culture for Behavioral Control
Design and Culture to Maintain Open Space
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

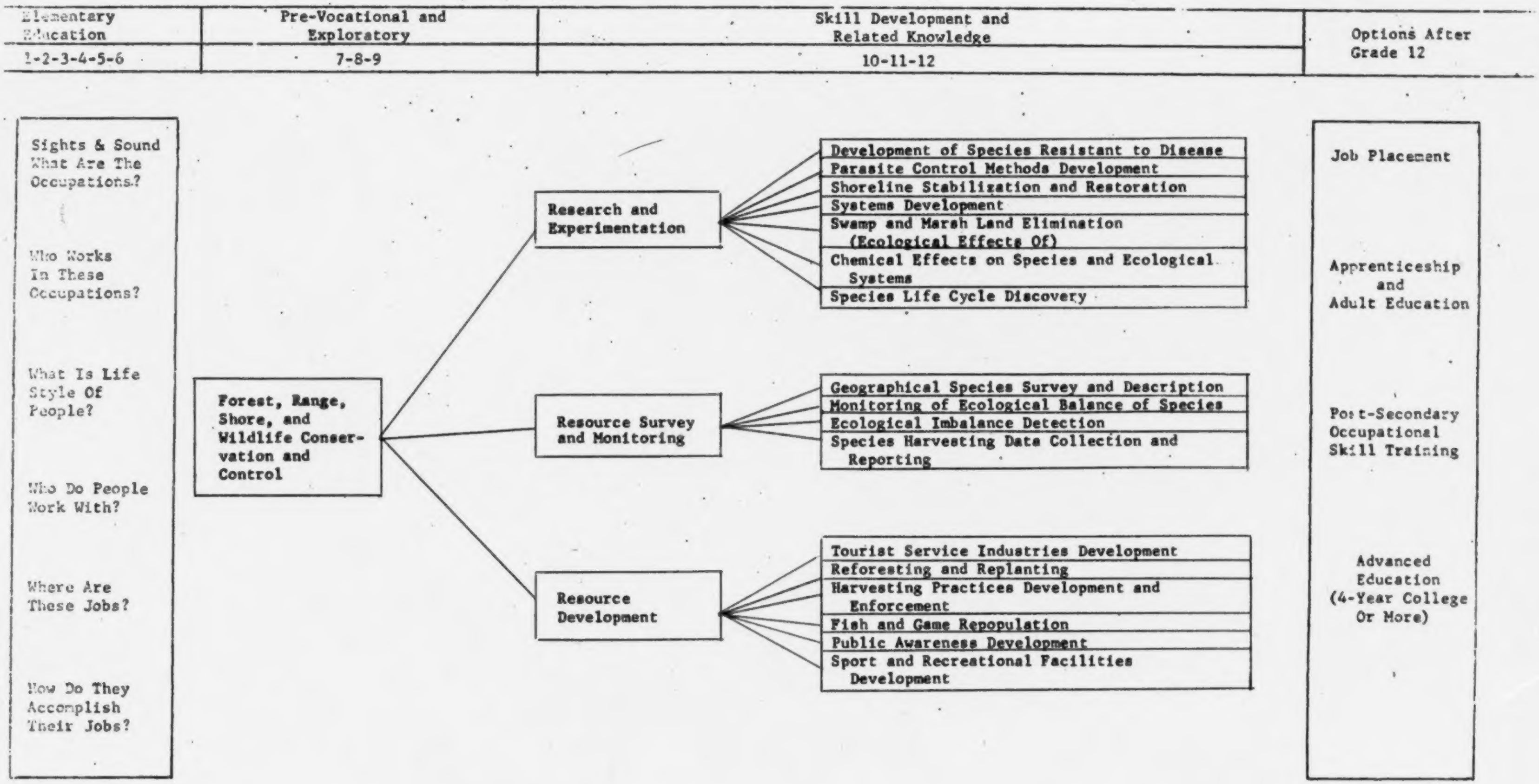
Cluster for Environment

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Development and Control of Physical Man-Made Environment (Continued)
Civil Technology Processes
Design and Construction of Streets, Highways, Bridges, Roadways and Airfields
Design and Construction of Waterways, Dams, Reservoirs and Hydroelectric Plants
Design and Construction of Sanitation Systems
Design and Construction of Towers, Buildings and Framework
Noise Abatement and Control
Noise Level Monitoring
Noise Level Ordinance Enforcement
Acoustical Design and Construction
Solid Waste Pollution Abatement and Control
Development and Enforcement of Systems for Solid Waste Disposal
Recycle Solid Waste Materials
Development and Implementation of Systems for Garbage Disposal
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

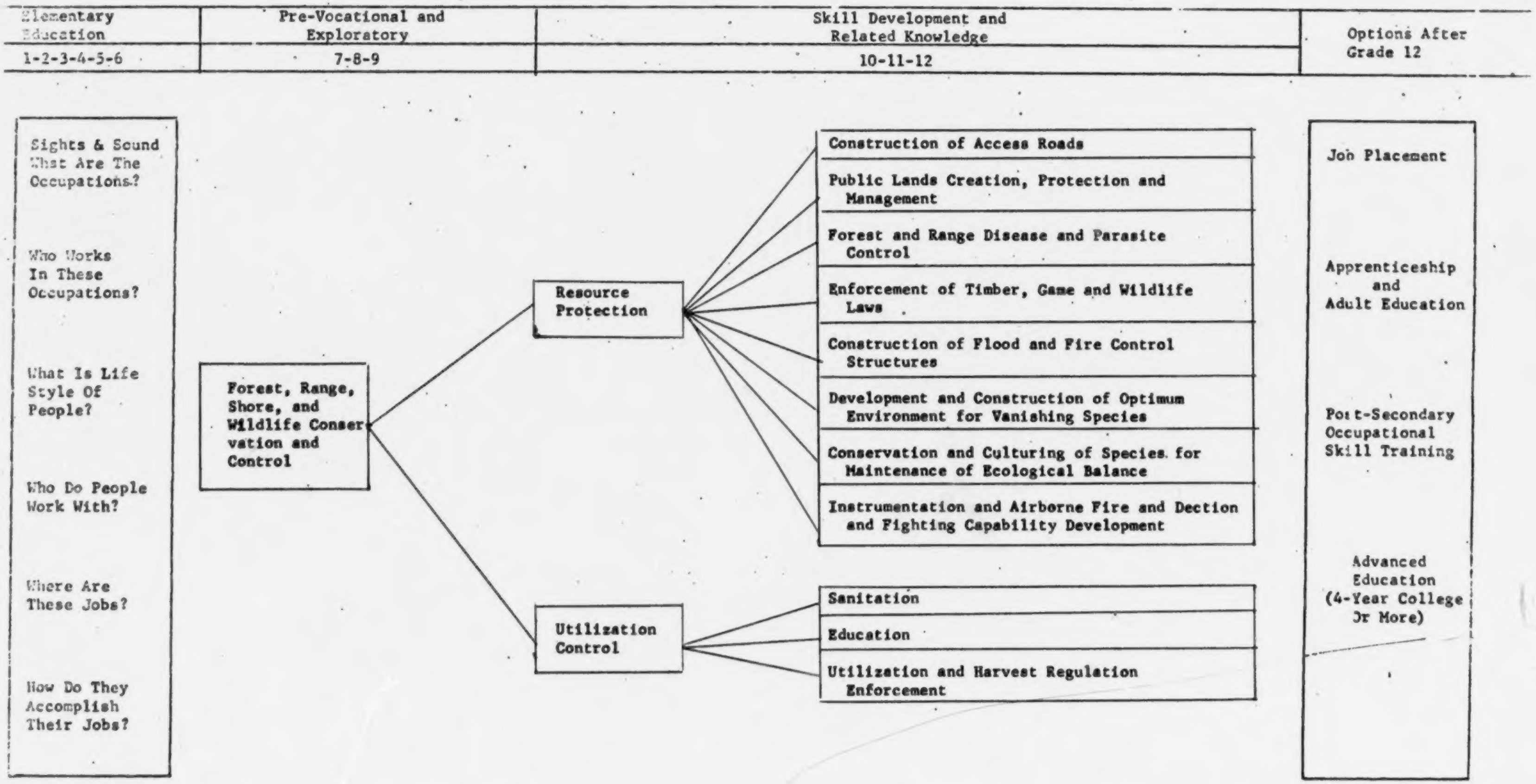
Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Forest, Range, Shore, and Wildlife Conservation and Control
Research and Experimentation
Development of Species Resistant to Disease
Parasite Control Methods Development
Shoreline Stabilization and Restoration
Systems Development
Swamp and Marsh Land Elimination (Ecological Effects Of)
Chemical Effects on Species and Ecological Systems
Species Life Cycle Discovery
Resource Survey and Monitoring
Geographical Species Survey and Description
Monitoring of Ecological Balance of Species
Ecological Imbalance Detection
Species Harvesting Data Collection and Reporting
Resource Development
Tourist Service Industries Development
Reforesting and Replanting
Harvesting Practices Development and Enforcement
Fish and Game Repopulation
Public Awareness Development
Sport and Recreational Facilities Development
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

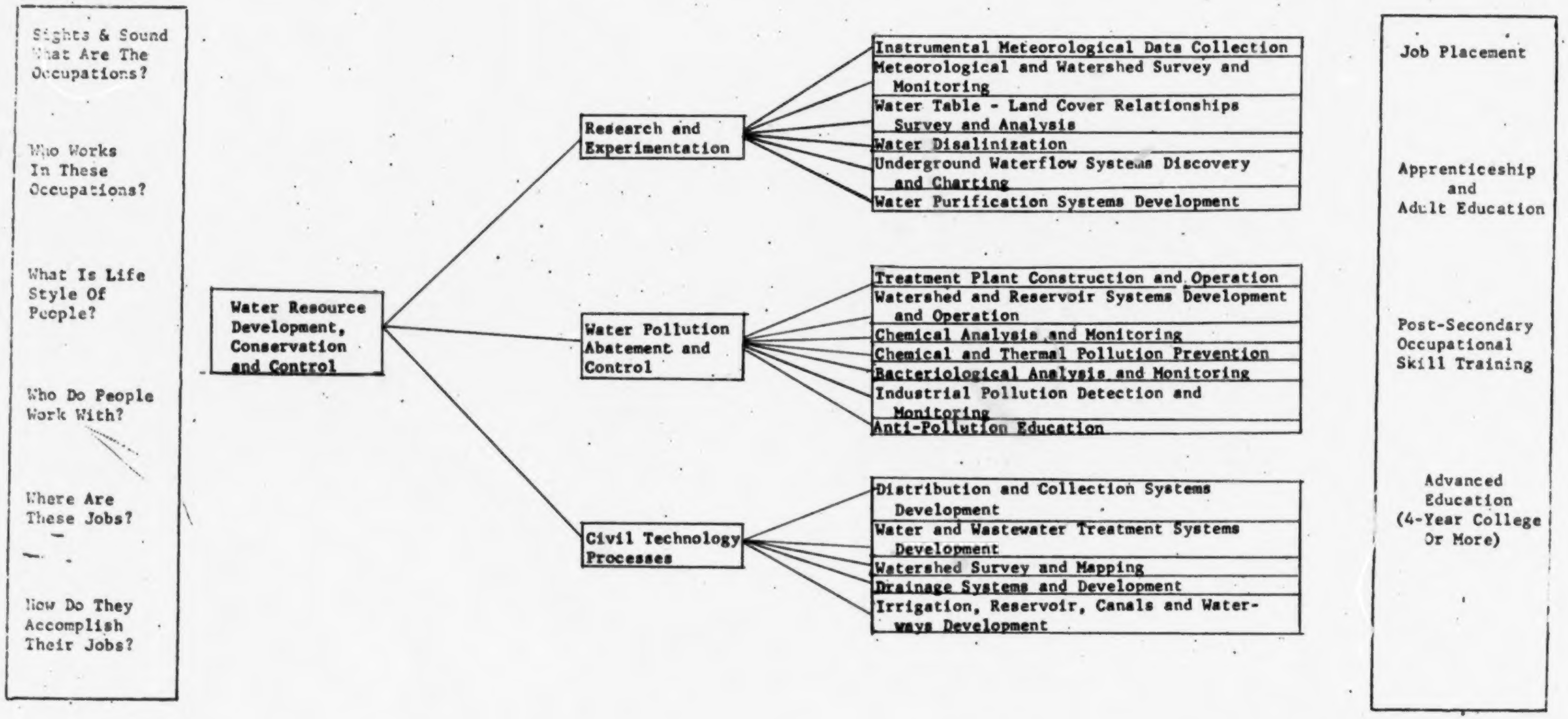
Cluster for
Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Forest, Range, Shore, and Wildlife Conservation and Control
Resource Protection
Utilization Control
Construction of Access Roads
Public Lands Creation, Protection and Management
Forest and Range Disease and Parasite Control
Enforcement of Timber, Game and Wildlife Laws
Construction of Flood and Fire Control Structures
Development and Construction of Optimum Environment for Vanishing Species
Conservation and Culturing of Species for Maintenance of Ecological Balance
Instrumentation and Airborne Fire and Dection and Fighting Capability Development
Sanitation
Education
Utilization and Harvest Regulation Enforcement
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

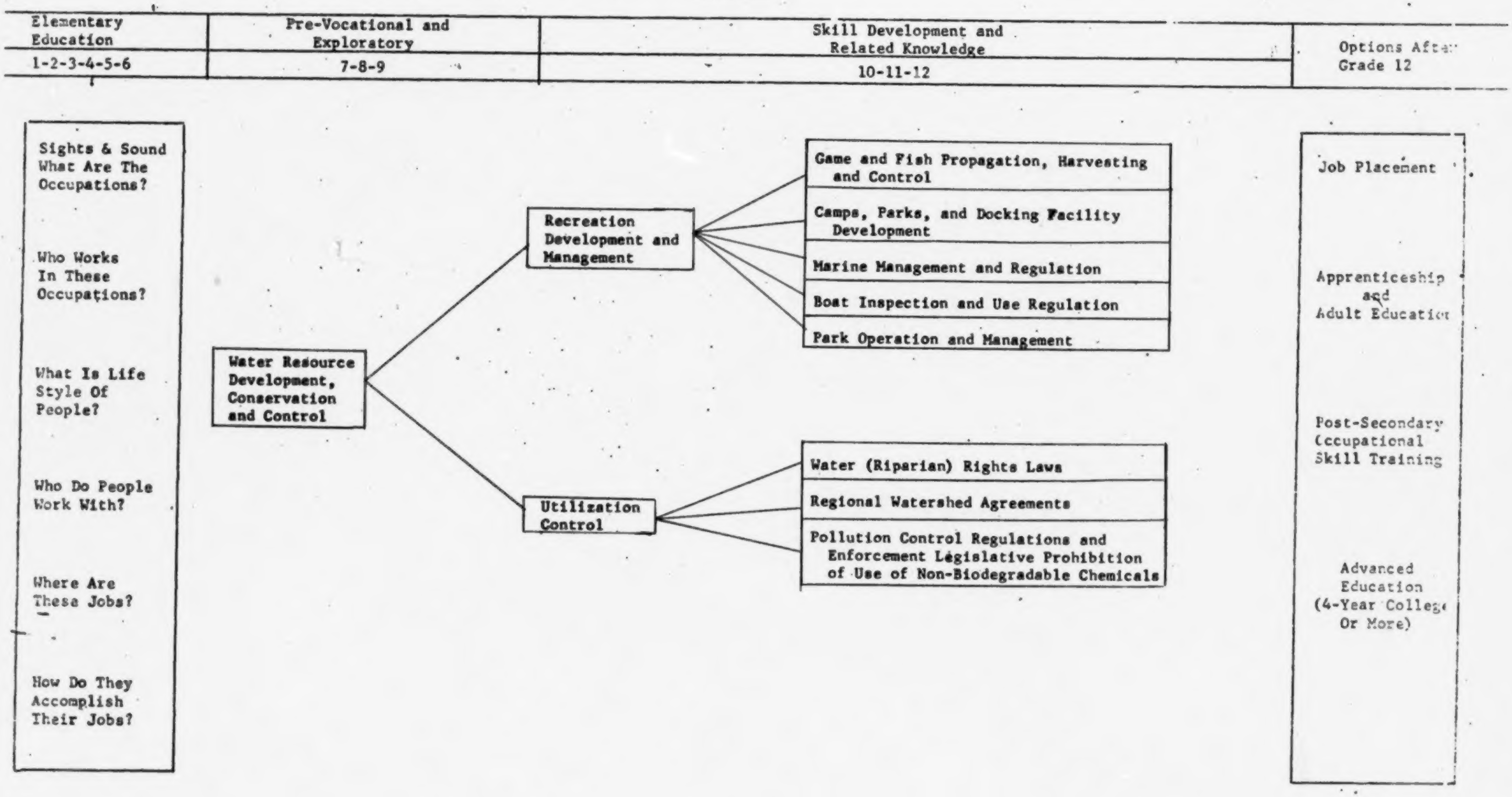
Cluster for
Environment

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Water Resource Development, Conservation and Control
Research and Experimentation
Instrumental Meteorological Data Collection
Meteorological and Watershed Survey and Monitoring
Water Table - Land Cover Relationships Survey and Analysis
Water Disalinization
Underground Waterflow Systems Discovery and Charting
Water Purification Systems Development
Water Pollution Abatement and Control
Treatment Plant Construction and Operation
Watershed and Reservoir Systems Development and Operation
Chemical Analysis and Monitoring
Chemical and Thermal Pollution Prevention
Bacteriological Analysis and Monitoring
Industrial Pollution Detection and Monitoring
Anti-Pollution Education
Civil Technology Processes
Distribution and Collection Systems Development
Water and Wastewater Treatment Systems Development
Watershed Survey and Mapping
Drainage Systems and Development
Irrigation, Reservoir, Canals and Waterways Development
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed Ly: USOE/DVTE
Draft
Revised
DATE 4/1/71

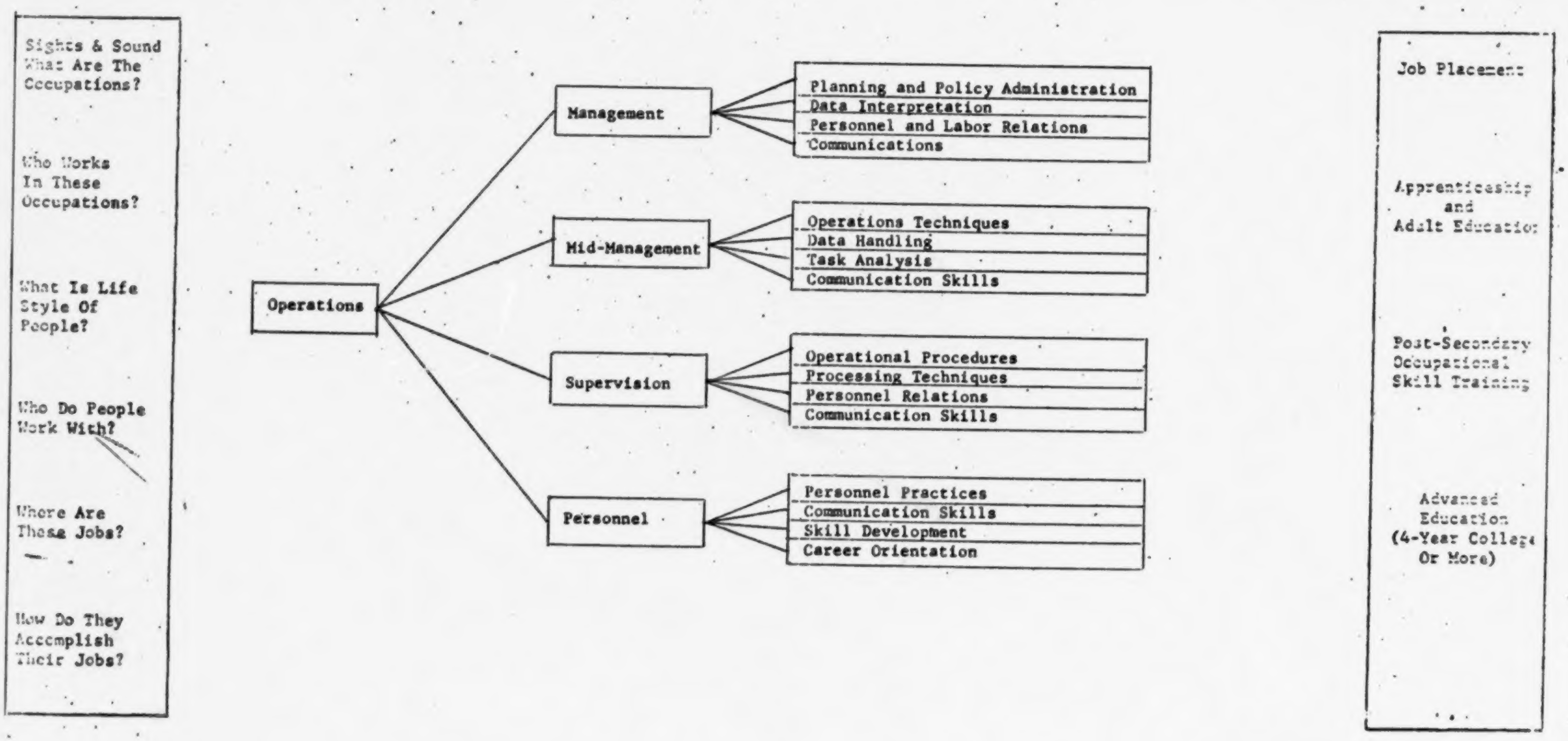
Cluster for
Environment


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Water Resource Development, Conservation and Control
Recreation Development and Management
Utilization Control
Game and Fish Propagation, Harvesting and Control
Camps, Parks, and Docking Facility Development
Marine Management and Regulation
Boat Inspection and Use Regulation
Park Operation and Management
Water (Riparian) Rights Laws
Regional Watershed Agreements
Pollution Control Regulations and Enforcement Legislative Prohibition of Use of Non-Biodegradable Chemicals
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
FINE ARTS AND HUMANITIES

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Developed By: USOE/DVT
Draft
Revised
DATE 4-1-71

Cluster for
FINE ARTS AND HUMANITIES

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options Aft Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

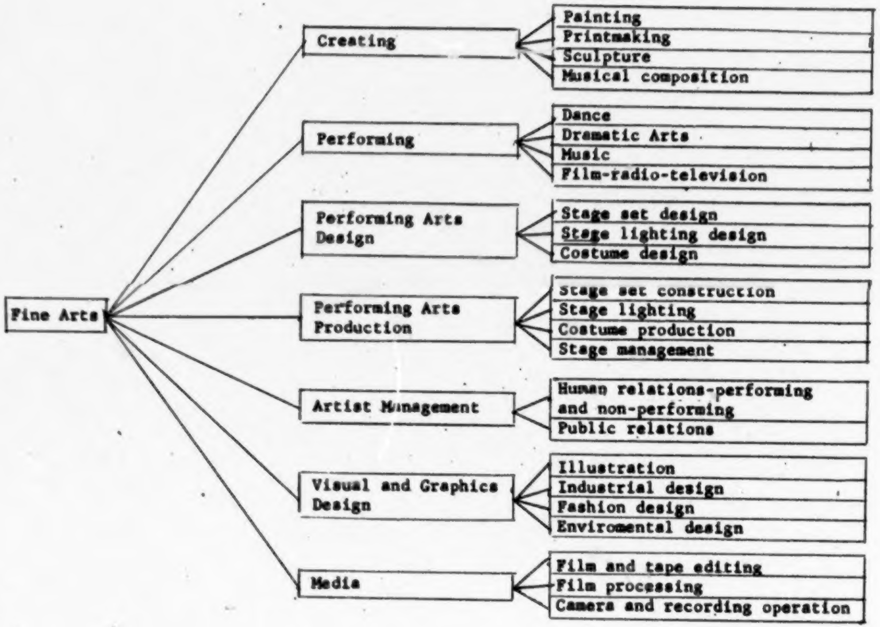
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

Apprenticeship
and
Adult Educatio

Post-Secondary
Occupational
Skill Training

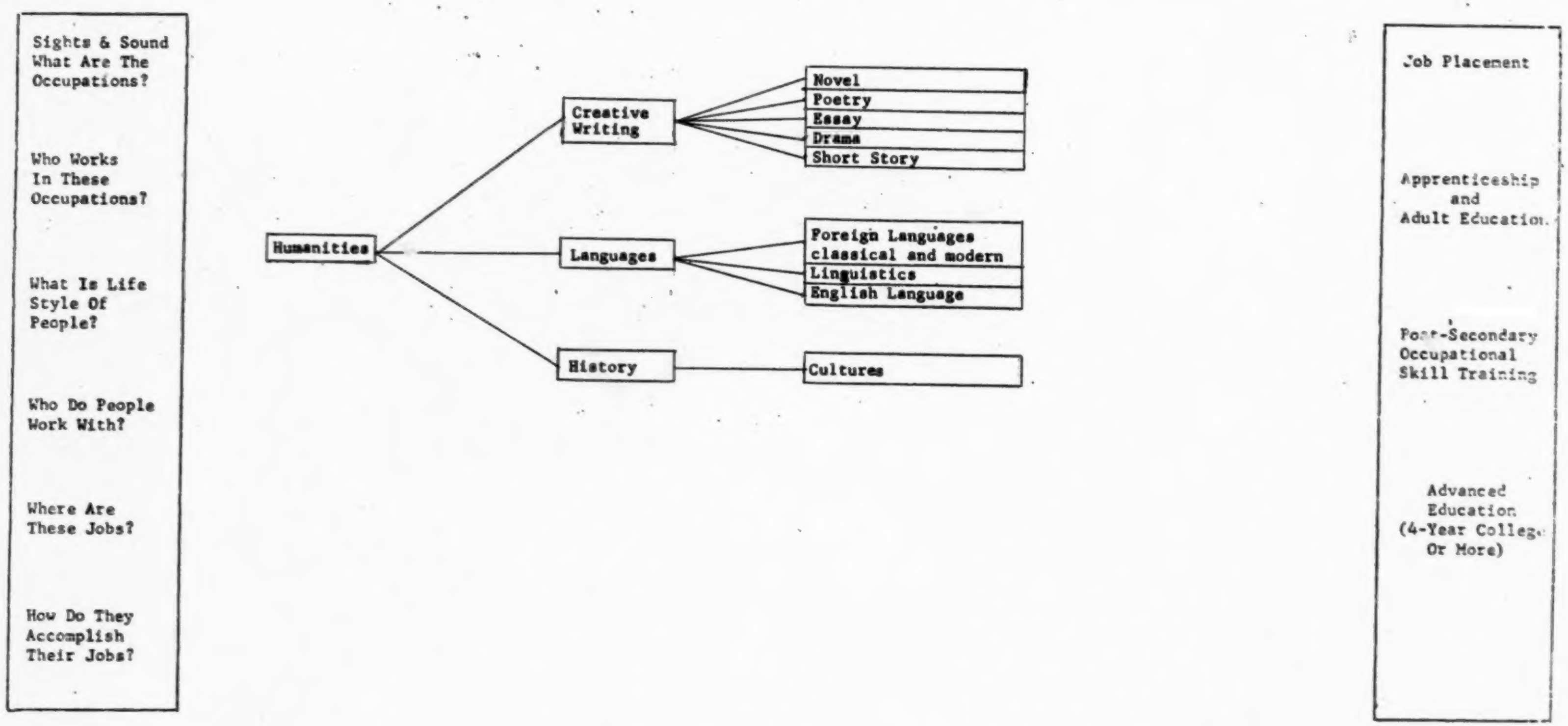
Advanced
Education
(4-Year Colleg
Or More)

FILMED FROM BEST AVAILABLE COPY

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
FINE ARTS AND HUMANITIES

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options Aft Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Humanities
Creative Writing
Languages
History
Novel
Poetry
Essay
Drama
Short Story
Foreign Languages classical and modern
Linguistics
English Language
Cultures
Job Placement
Apprenticeship and Adult Educatio
Post-Secondary Occupational Skill Training
Advanced Education (4-Year Colleg Or More)

Developed by:
Draft
Revised
DATE 4-1-71

Cluster for
HOSPITALITY AND RECREATION

ntary ation	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options Aft Grade 12
-3-4-5-6	7-8-9	10-11-12	

& Sound
Are The
cupations?

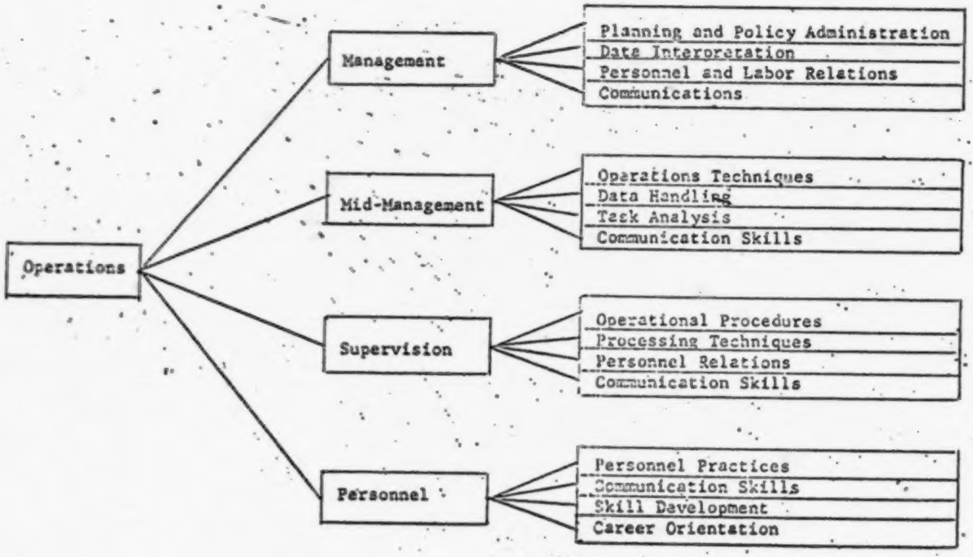
Works
These
cupations?

t Is Life
le Of
ple?

Do People
rk With?

re Are
e Jobs?

Do They
mplish
r Jobs?



Job Placement

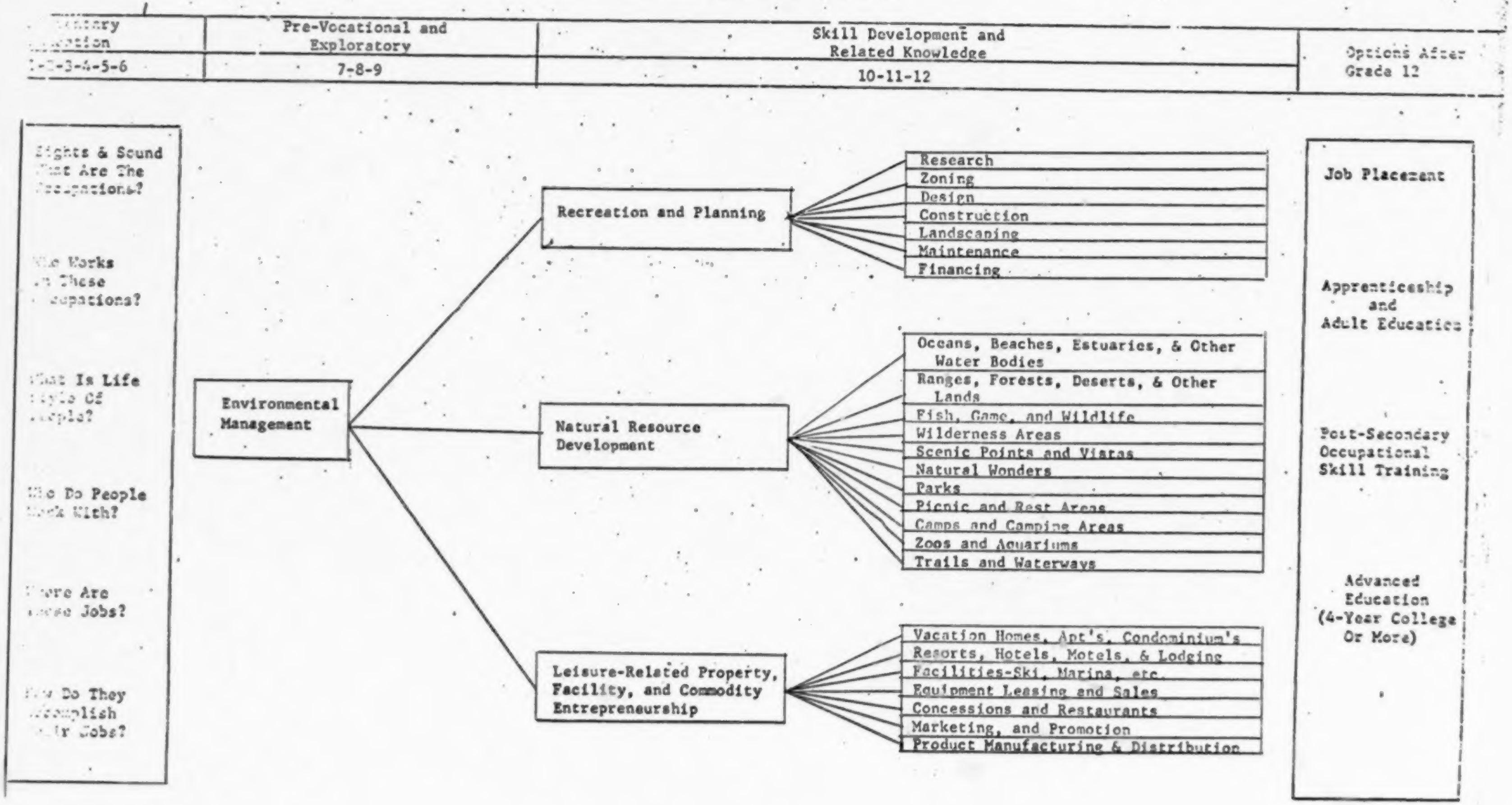
Apprenticeship
and
Adult Education

Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

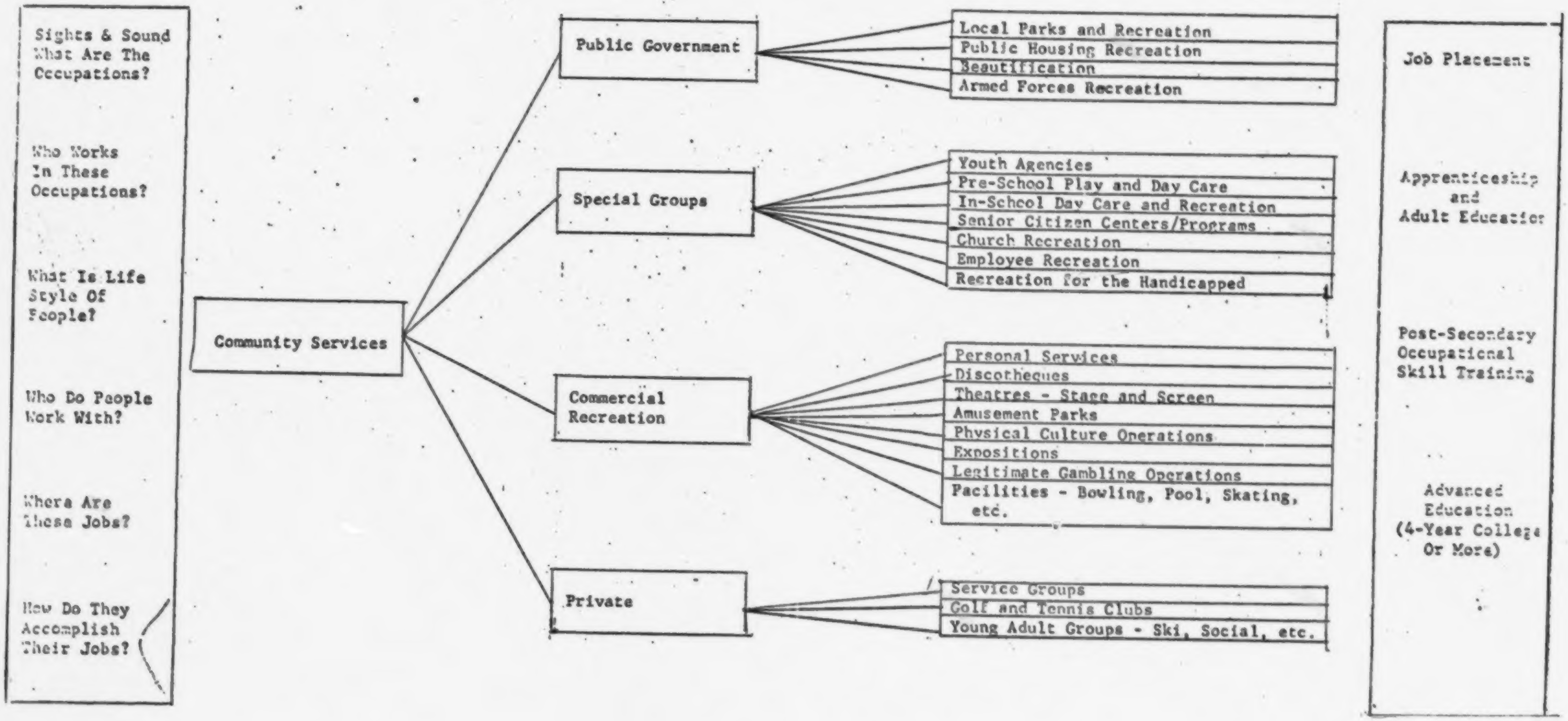
Cluster for RECREATION AND HOSPITALITY (TOURISM)


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Environmental Management
Recreation and Planning
Research
Zoning
Design
Construction
Landscaping
Maintenance
Financing
Natural Resource Development
Oceans, Beaches, Estuaries, & Other Water Bodies
Ranges, Forests, Deserts, & Other Lands
Fish, Game, and Wildlife
Wilderness Areas
Scenic Points and Vistas
Natural Wonders
Parks
Picnic and Rest Areas
Camps and Camping Areas
Zoos and Aquariums
Trails and Waterways
Leisure-Related Property, Facility, and Commodity Entrepreneurship
Vacation Homes, Apt's, Condominium's
Resorts, Hotels, Motels, & Lodging
Facilities-Ski, Marina, etc.
Equipment Leasing and Sales
Concessions and Restaurants
Marketing, and Promotion
Product Manufacturing & Distribution
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed by: USOE/[illegible]
Draft
Revised
DATE 4/1/71

Cluster for
RECREATION AND HOSPITALITY (TOURISM)

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

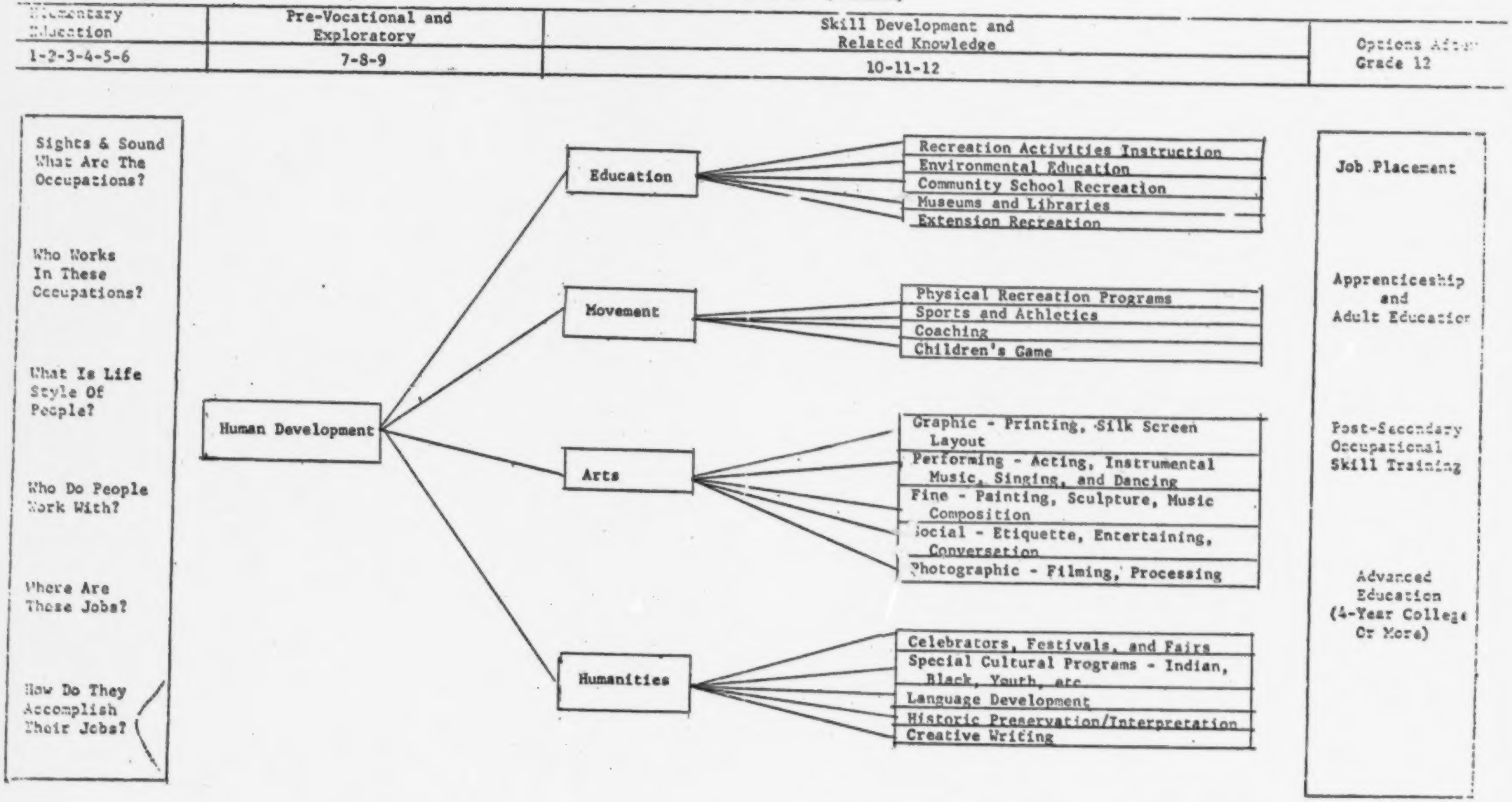

Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Community Services
Public Government
Special Groups
Commercial Recreation
Private
Local Parks and Recreation
Public Housing Recreation
Beautification
Armed Forces Recreation
Youth Agencies
Pre-School Play and Day Care
In-School Day Care and Recreation
Senior Citizen Centers/Programs
Church Recreation
Employee Recreation
Recreation for the Handicapped
Personal Services
Discotheques
Theatres - Stage and Screen
Amusement Parks
Physical Culture Operations
Expositions
Legitimate Gambling Operations
Facilities - Bowling, Pool, Skating, etc.
Service Groups
Golf and Tennis Clubs
Young Adult Groups - Ski, Social, etc.
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed by: [illegible]
Draft
Revised
DATE 4/1/71

Cluster for

RECREATION AND HOSPITALITY (TOURISM)

3

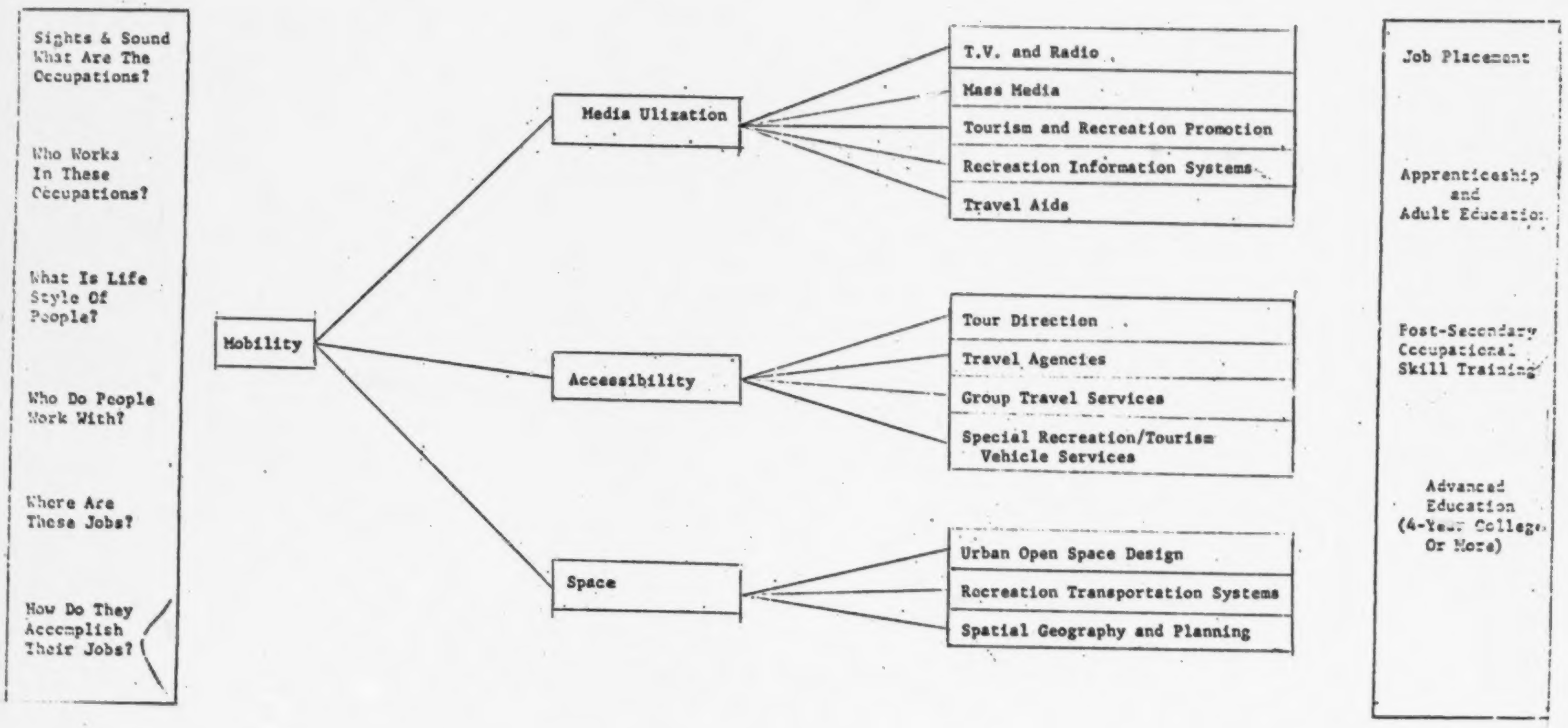

Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Human Development
Education
Movement
Arts
Humanities
Recreation Activities Instruction
Environmental Education
Community School Recreation
Museums and Libraries
Extension Recreation
Physical Recreation Programs
Sports and Athletics
Coaching
Children's Game
Graphic - Printing, Silk Screen Layout
Performing - Acting, Instrumental Music, Singing, and Dancing
Fine - Painting, Sculpture, Music Composition
Social - Etiquette, Entertaining, Conversation
Photographic - Filming, Processing
Celebrators, Festivals, and Fairs
Special Cultural Programs - Indian, Black, Youth, etc
Language Development
Historic Preservation/Interpretation
Creative Writing
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: [illegible]
Draft
Revised
DATE 4/1/71

Cluster for

RECREATION AND HOSPITALITY (TOURISM)

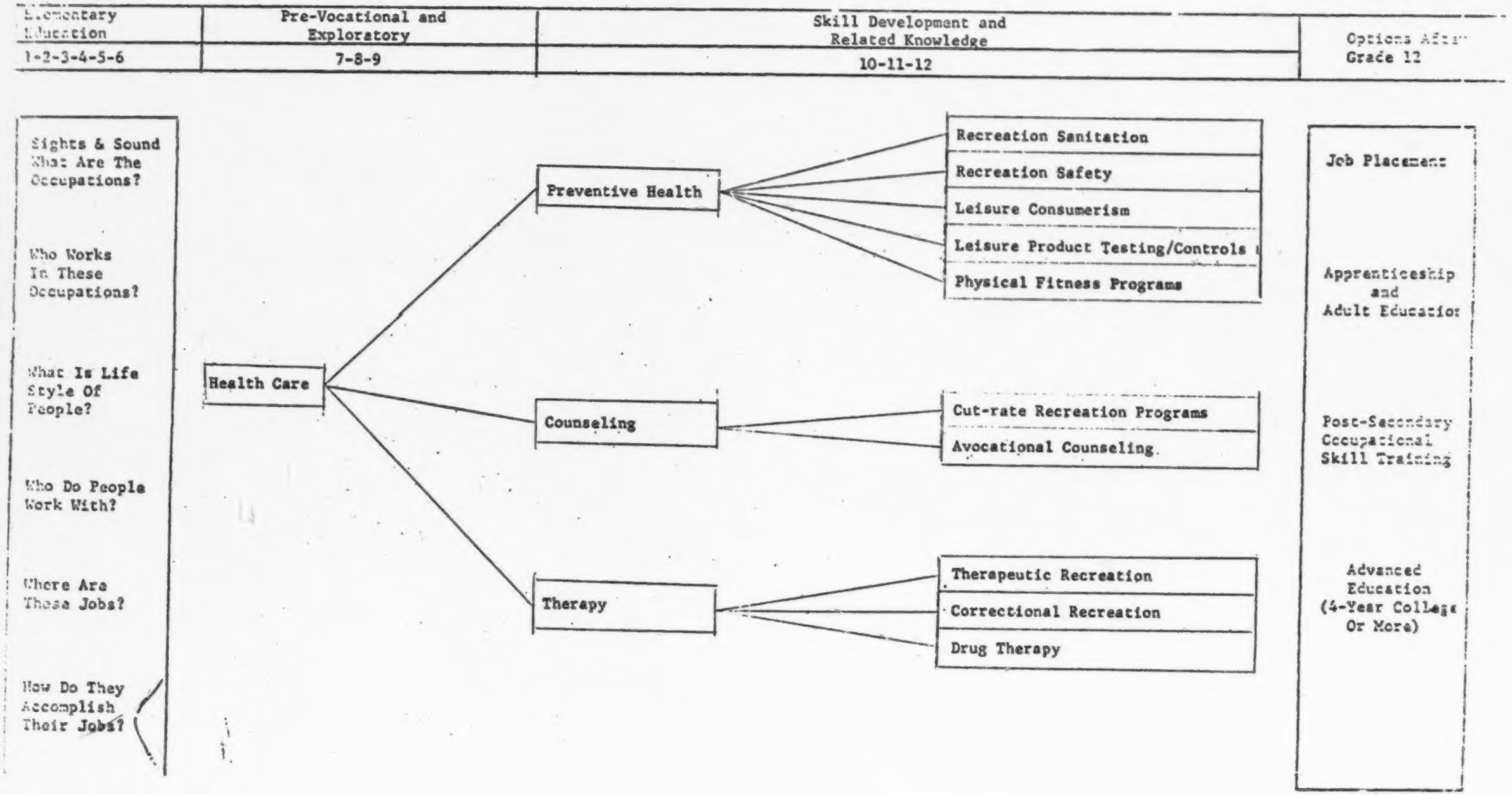
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Mobility
Media Ulization
Accessibility
Space
T.V. and Radio
Mass Media
Tourism and Recreation Promotion
Recreation Information Systems
Travel Aids
Tour Direction
Travel Agencies
Group Travel Services
Special Recreation/Tourism Vehicle Services
Urban Open Space Design
Recreation Transportation Systems
Spatial Geography and Planning
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed by:
Draft
Revised
DATE 4/1/71

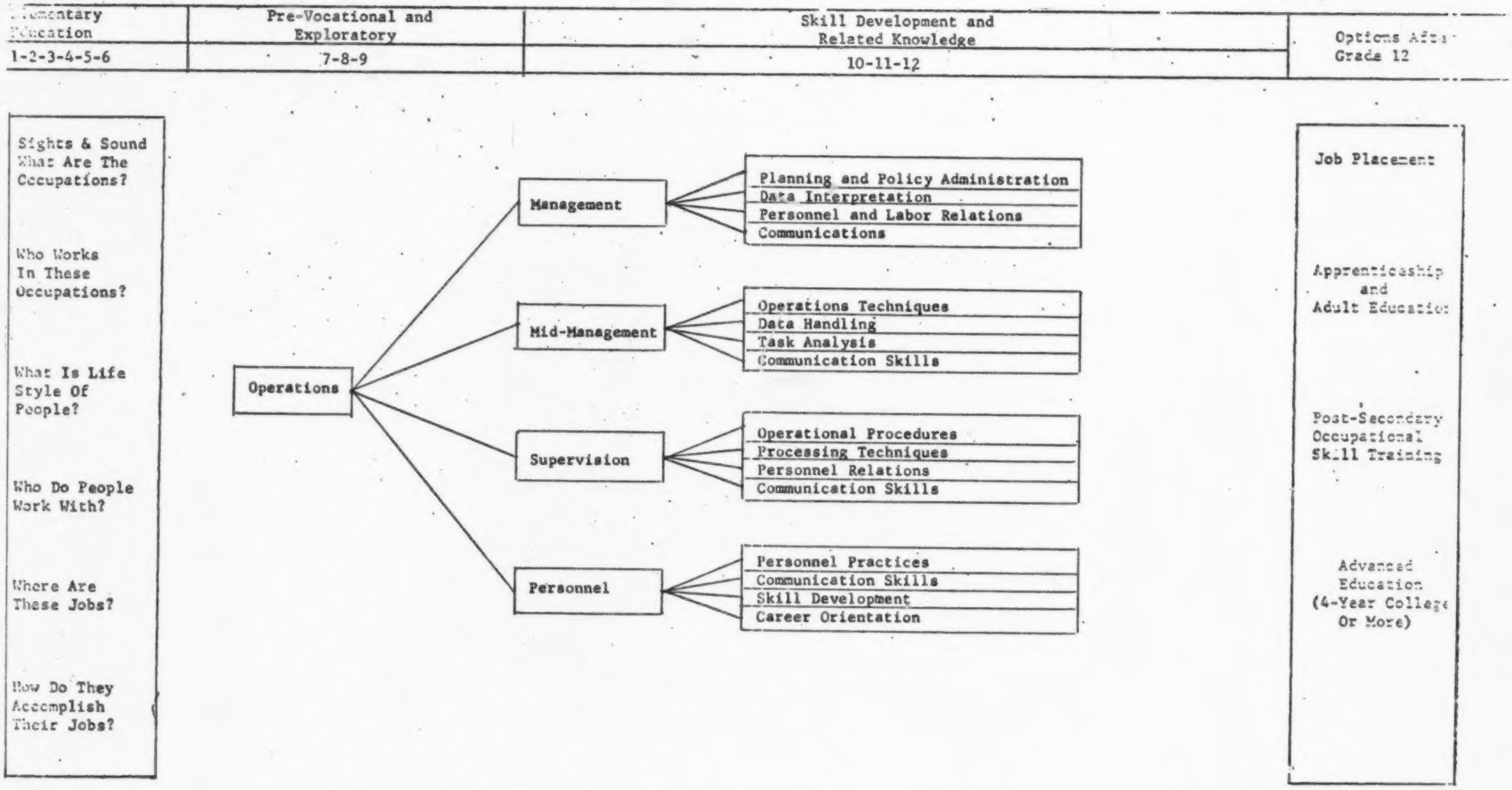
Cluster for
RECREATION AND HOSPITALITY (TOURISM)



Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Health Care
Preventive Health
Counseling
Therapy
Recreation Sanitation
Recreation Safety
Leisure Consumerism
Leisure Product Testing/Controls
Physical Fitness Programs
Cut-rate Recreation Programs
Avocational Counseling
Therapeutic Recreation
Correctional Recreation
Drug Therapy
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

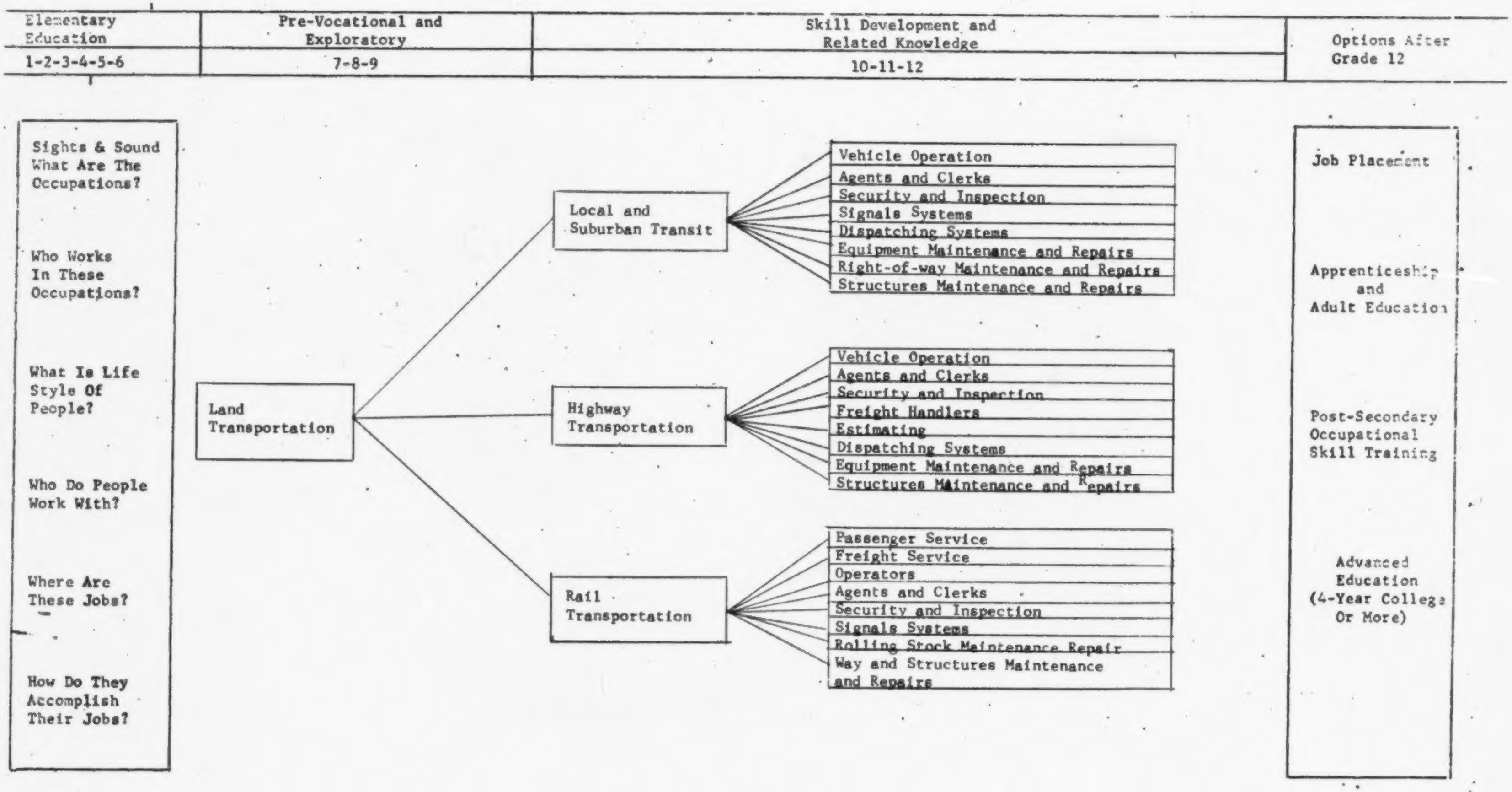
Developed By: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
TRANPORTATION



Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

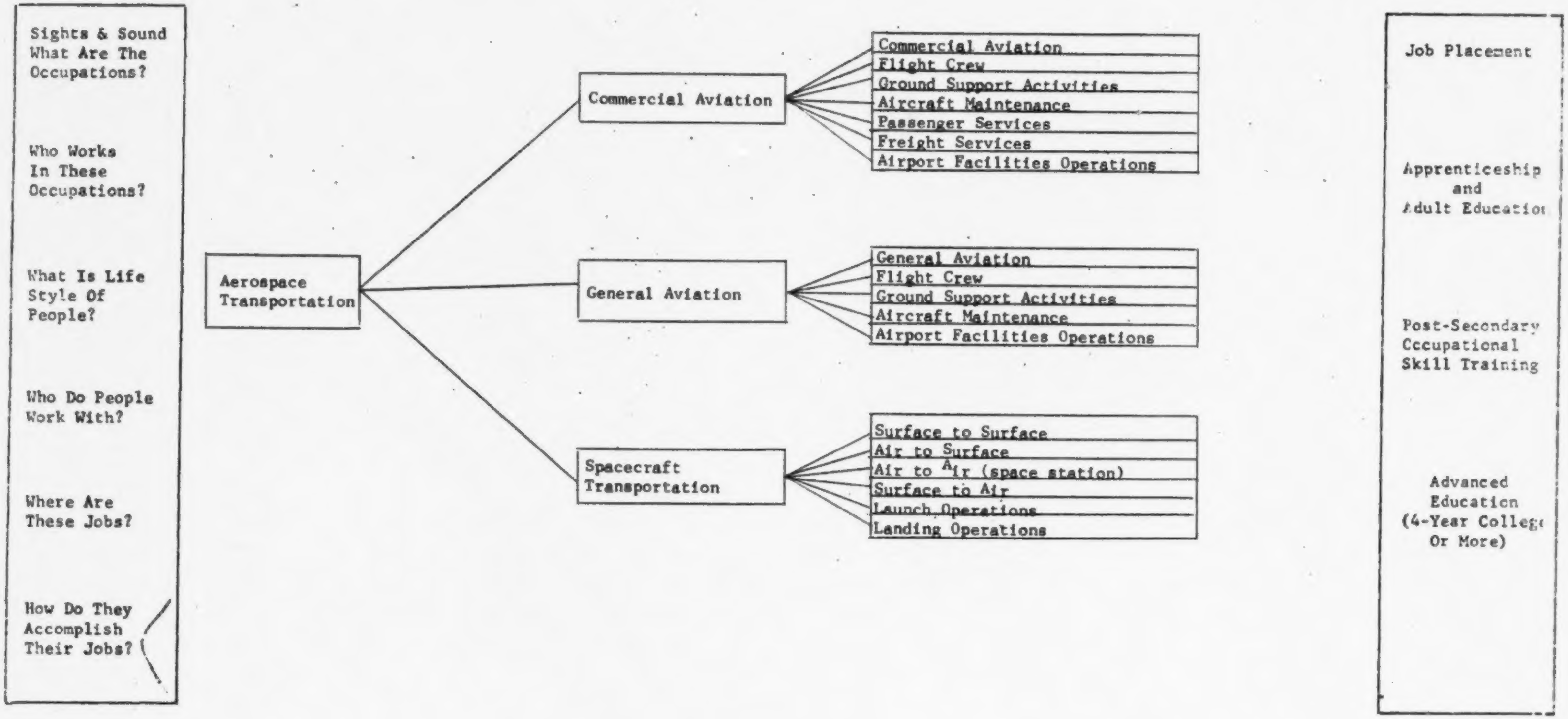
Cluster for
TRANSPORTATION


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Land Transportation
Local and Suburban Transit
Highway Transportation
Rail Transportation
Vehicle Operation
Agents and Clerks
Security and Inspection
Signals Systems
Dispatching Systems
Equipment Maintenance and Repairs
Right-of-way Maintenance and Repairs
Structures Maintenance and Repairs
Vehicle Operation
Agents and Clerks
Security and Inspection
Freight Handlers
Estimating
Dispatching Systems
Equipment Maintenance and Repairs
Structures Maintenance and Repairs
Passenger Service
Freight Service
Operators
Agents and Clerks
Security and Inspection
Signals Systems
Rolling Stock Maintenance Repair
Way and Structures Maintenance and Repairs
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE 3
Draft
Revised
DATE 4/1/71

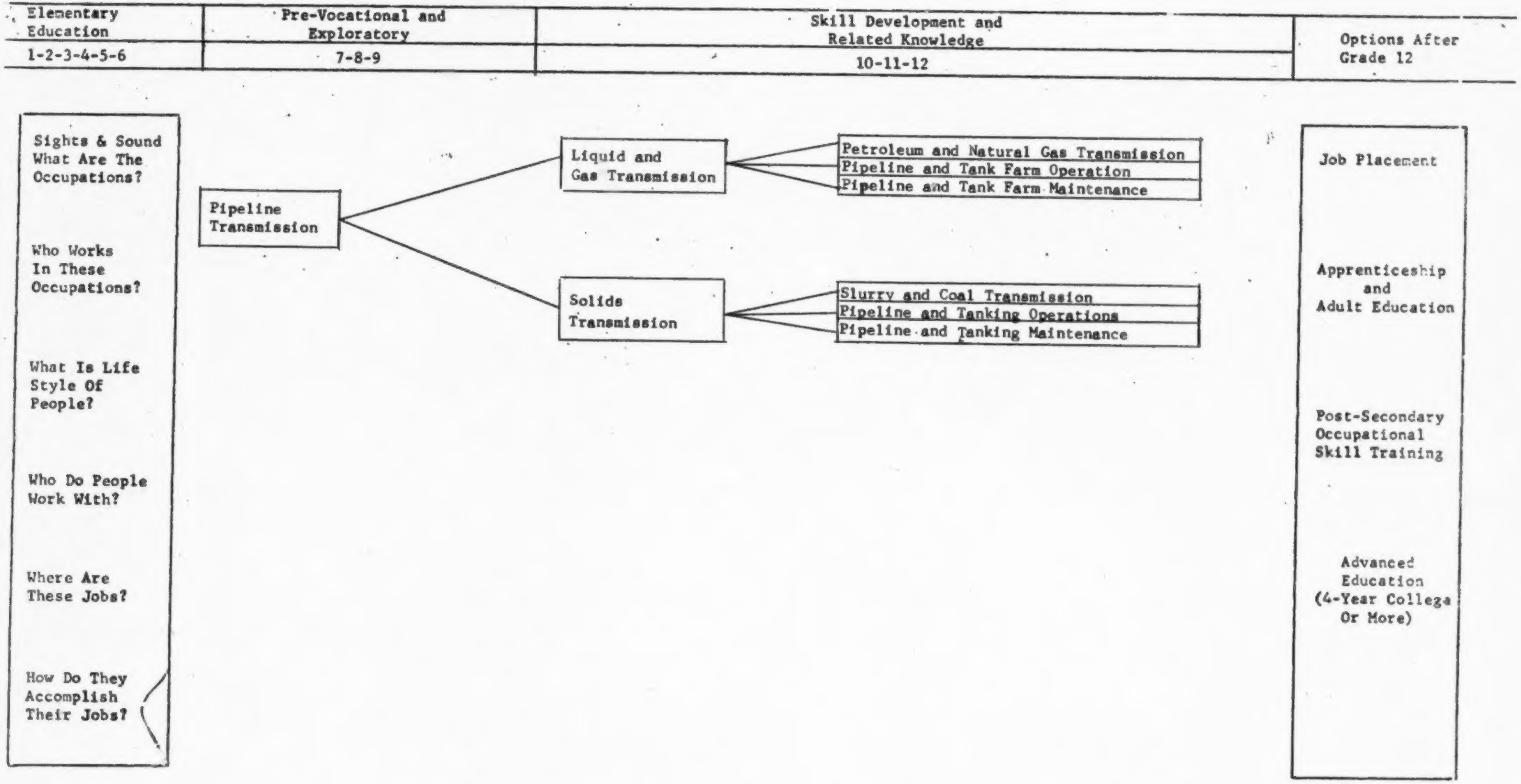
Cluster for
TRANSPORTATION

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Aerospace Transportation
Commercial Aviation
General Aviation
Spacecraft Transportation
Commercial Aviation
Flight Crew
Ground Support Activities
Aircraft Maintenance
Passenger Services
Freight Services
Airport Facilities Operations
General Aviation
Flight Crew
Ground Support Activities
Aircraft Maintenance
Airport Facilities Operations
Surface to Surface
Air to Surface
Air to Air (space station)
Surface to Air
Launch Operations
Landing Operations
Job Placement
Apprenticeship and Adult Educatio
Post-Secondary Occupational Skill Training
Advanced Education (4-Year Colleg Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

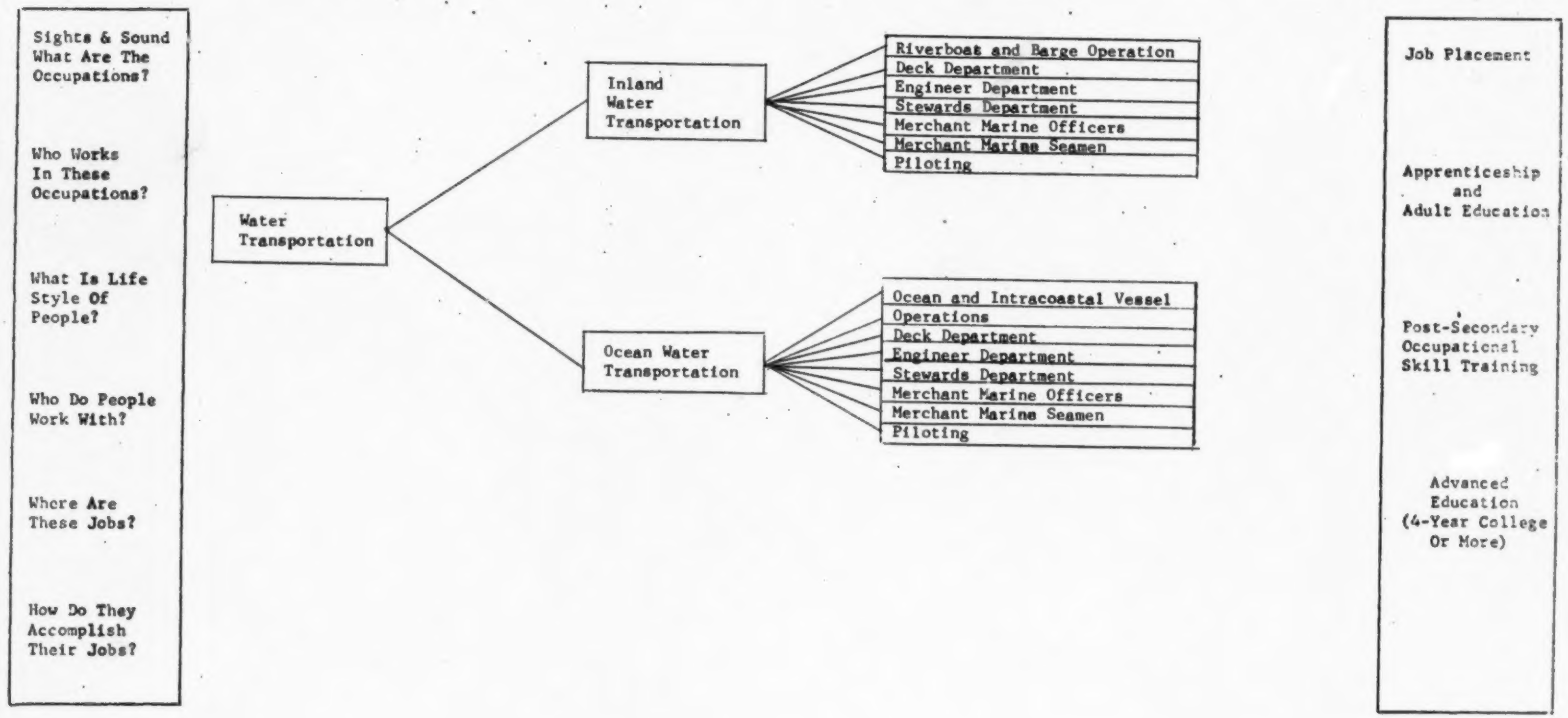
Cluster for
TRANSPORTATION


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Pipeline Transmission
Liquid and Gas Transmission
Solids Transmission
Petroleum and Natural Gas Transmission
Pipeline and Tank Farm Operation
Pipeline and Tank Farm Maintenance
Slurry and Coal Transmission
Pipeline and Tanking Operations
Pipeline and Tanking Maintenance
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

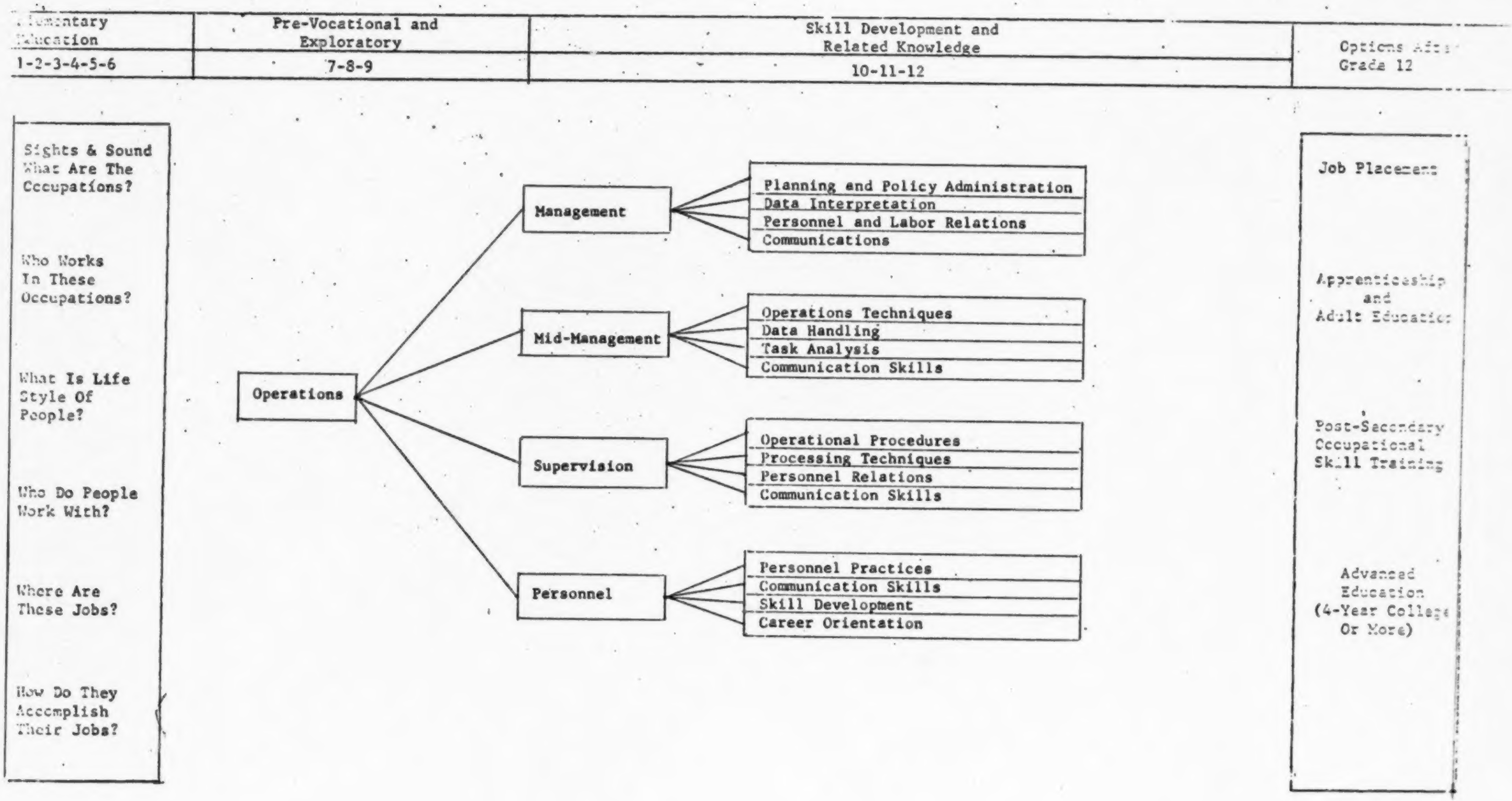
Cluster for
TRANSPORTATION

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Water Transportation
Inland Water Transportation
Ocean Water Transportation
Riverboat and Barge Operation
Deck Department
Engineer Department
Stewards Department
Merchant Marine Officers
Merchant Marine Seamen
Piloting
Ocean and Intracoastal Vessel
Operations
Deck Department
Engineer Department
Stewards Department
Merchant Marine Officers
Merchant Marine Seamen
Piloting
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE [illegible]
Draft
Revised
DATE 4-1-71

Cluster for
CONSTRUCTION



Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for Construction

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

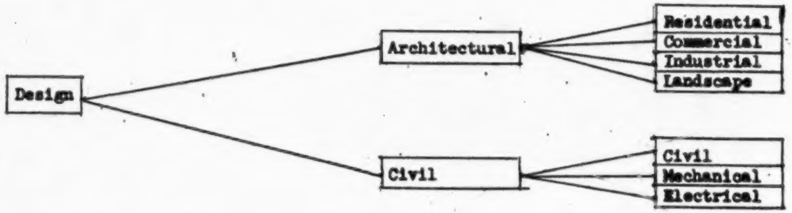
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

Apprenticeship and Adult Education

Post-Secondary Occupational Skill Training

Advanced Education (4-Year College Or More)

Developed By: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for Construction

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

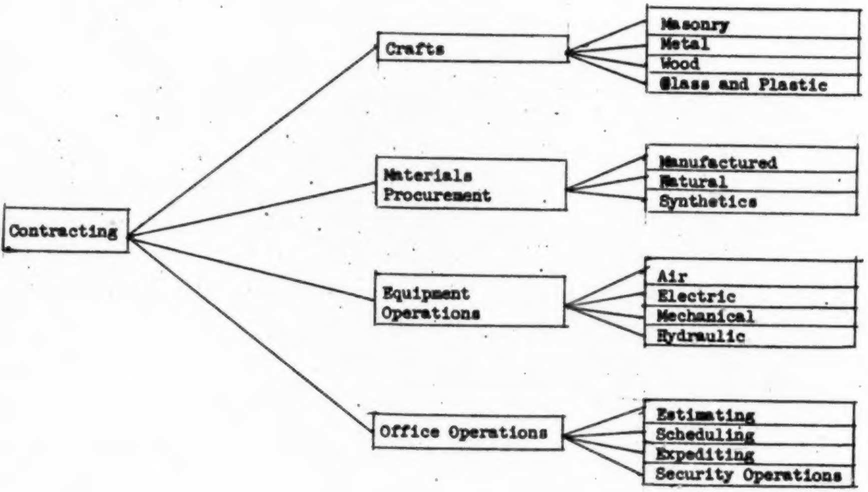
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

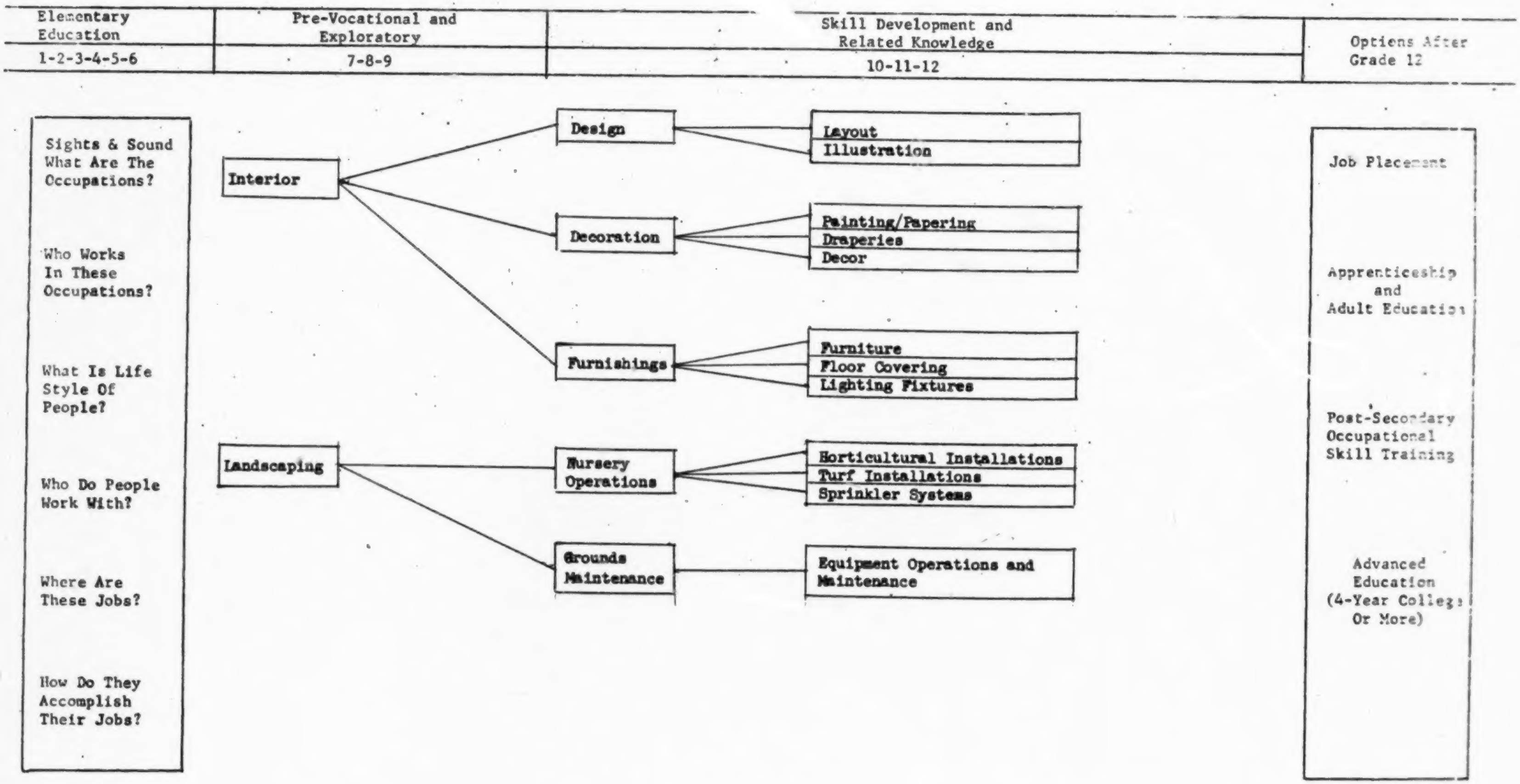
Apprenticeship
and
Adult Education

Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

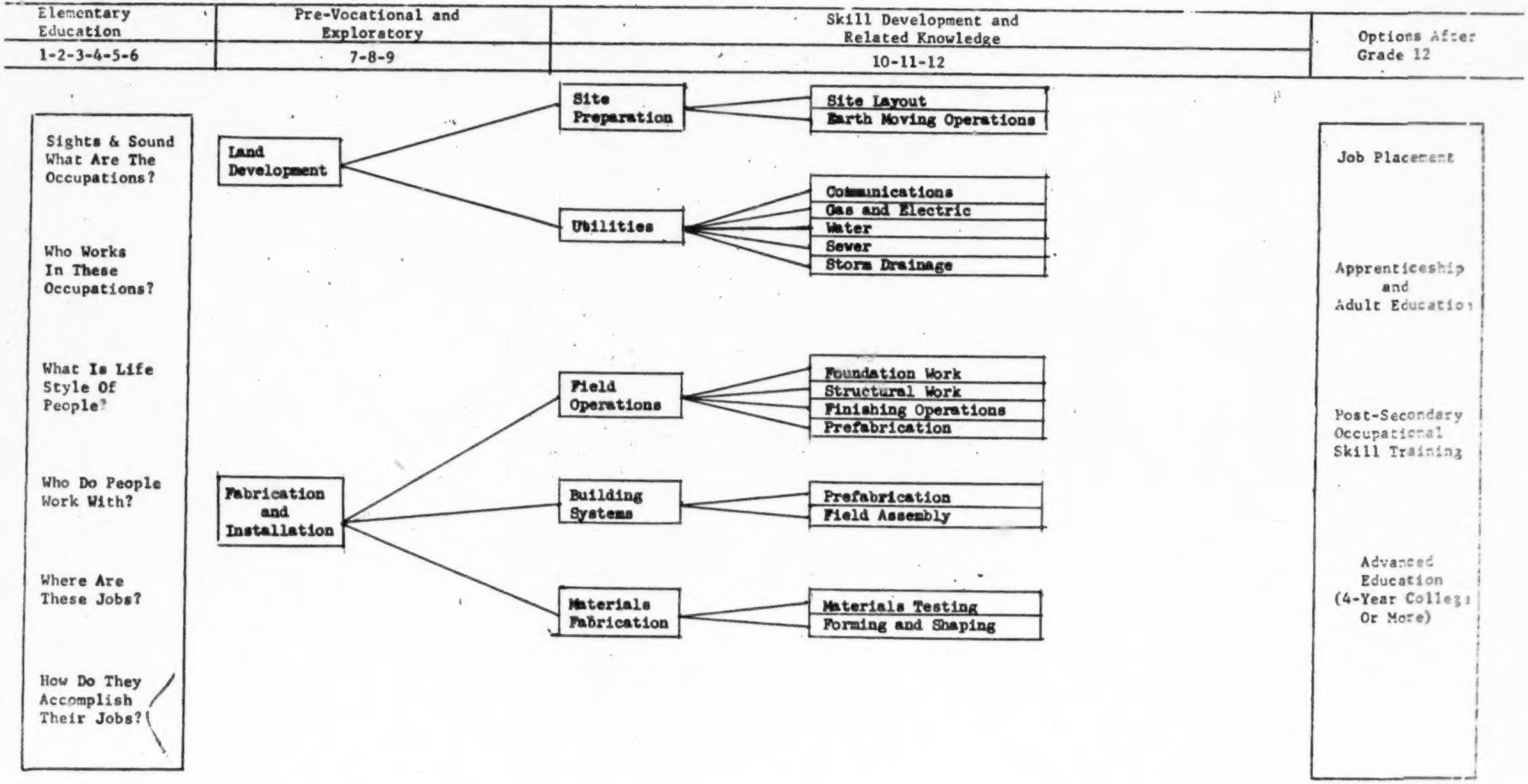
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for Construction


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Interior
Landscaping
Design
Decoration
Furnishings
Nursery Operations
Grounds Maintenance
Layout
Illustration
Painting/Papering
Draperies
Decor
Furniture
Floor Covering
Lighting Fixtures
Horticultural Installations
Turf Installations
Sprinkler Systems
Equipment Operations and Maintenance
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for Construction

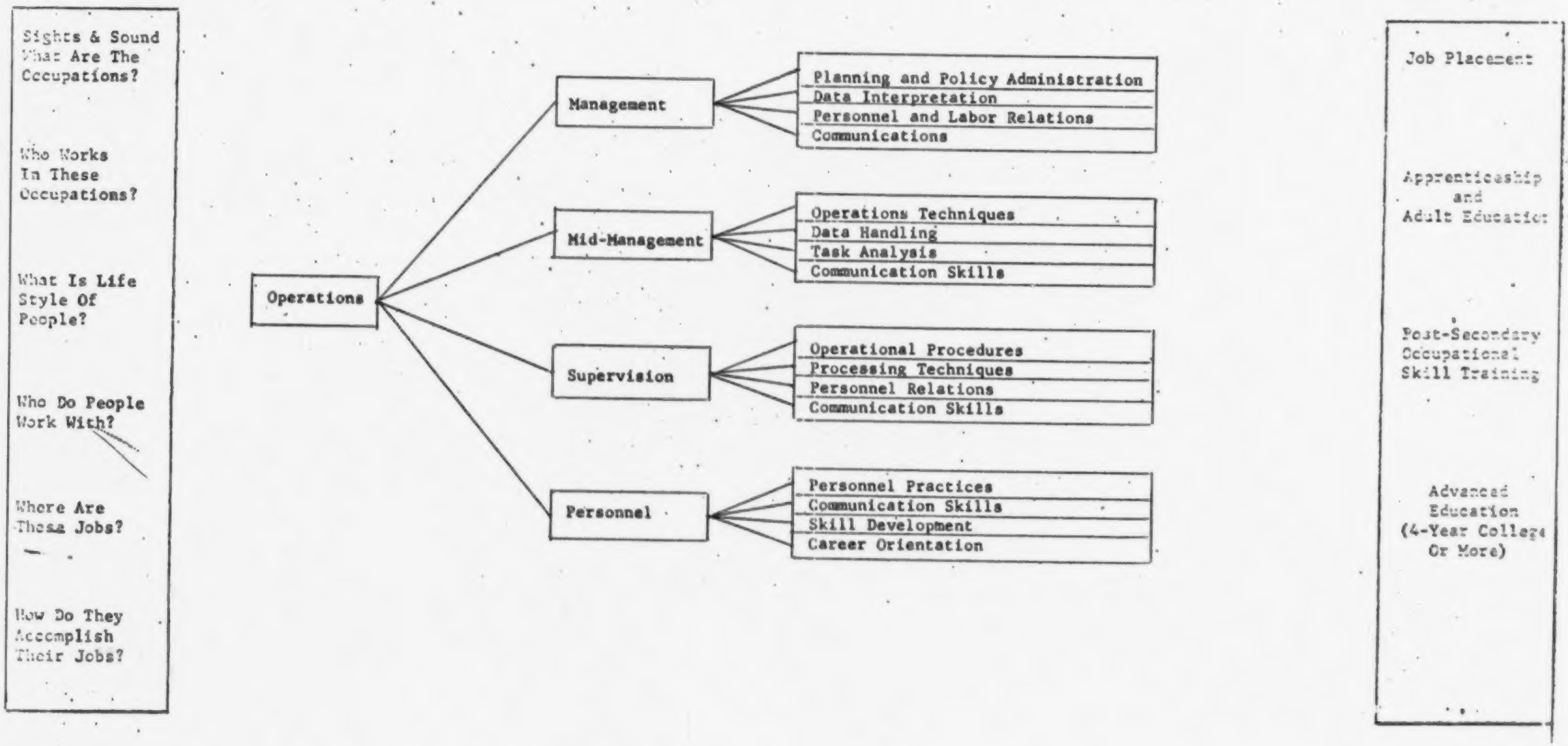


FILMED FROM BEST AVAILABLE COPY

Developed By: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
MANUFACTURING

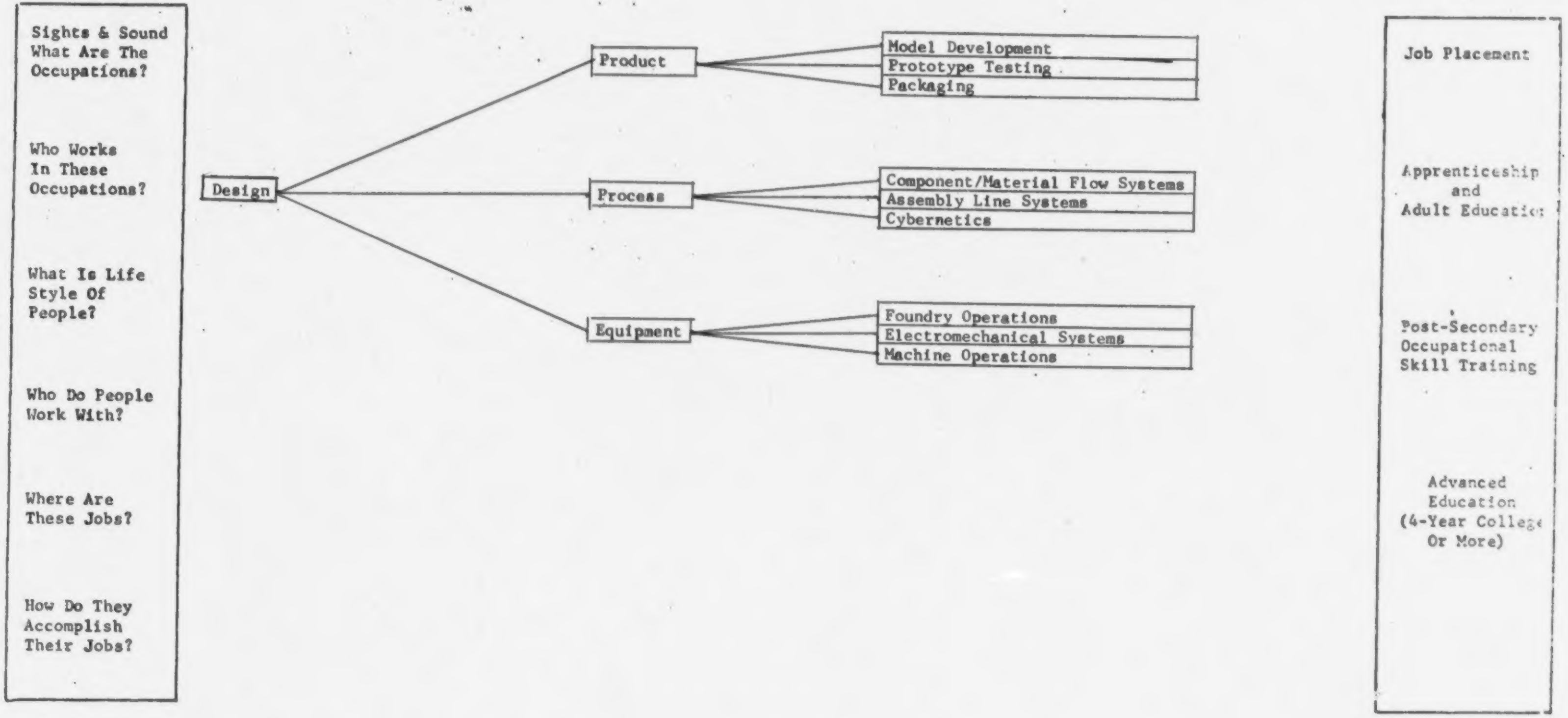
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
MANUFACTURING

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options Aft Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Design
Product
Process
Equipment
Model Development
Prototype Testing
Packaging
Component/Material Flow Systems
Assembly Line Systems
Cybernetics
Foundry Operations
Electromechanical Systems
Machine Operations
Job Placement
Apprenticeship and Adult Educatic
Post-Secondary Occupational Skill Training
Advanced Education (4-Year Colleg Or More)

Developed by: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
MANUFACTURING

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

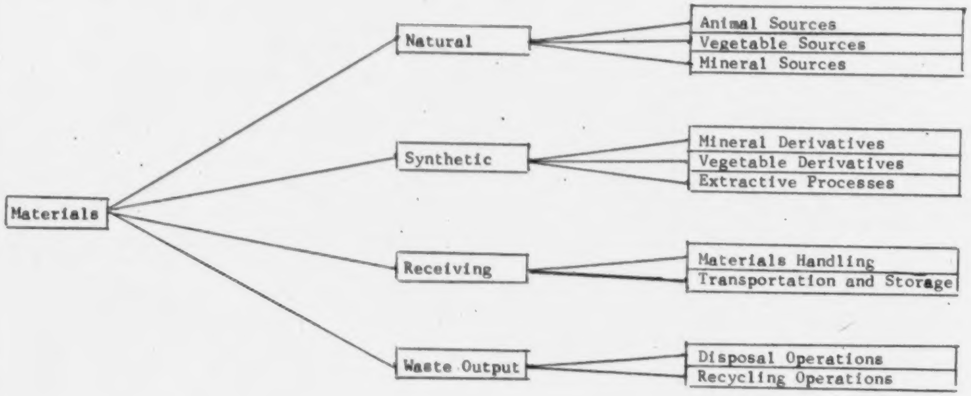
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

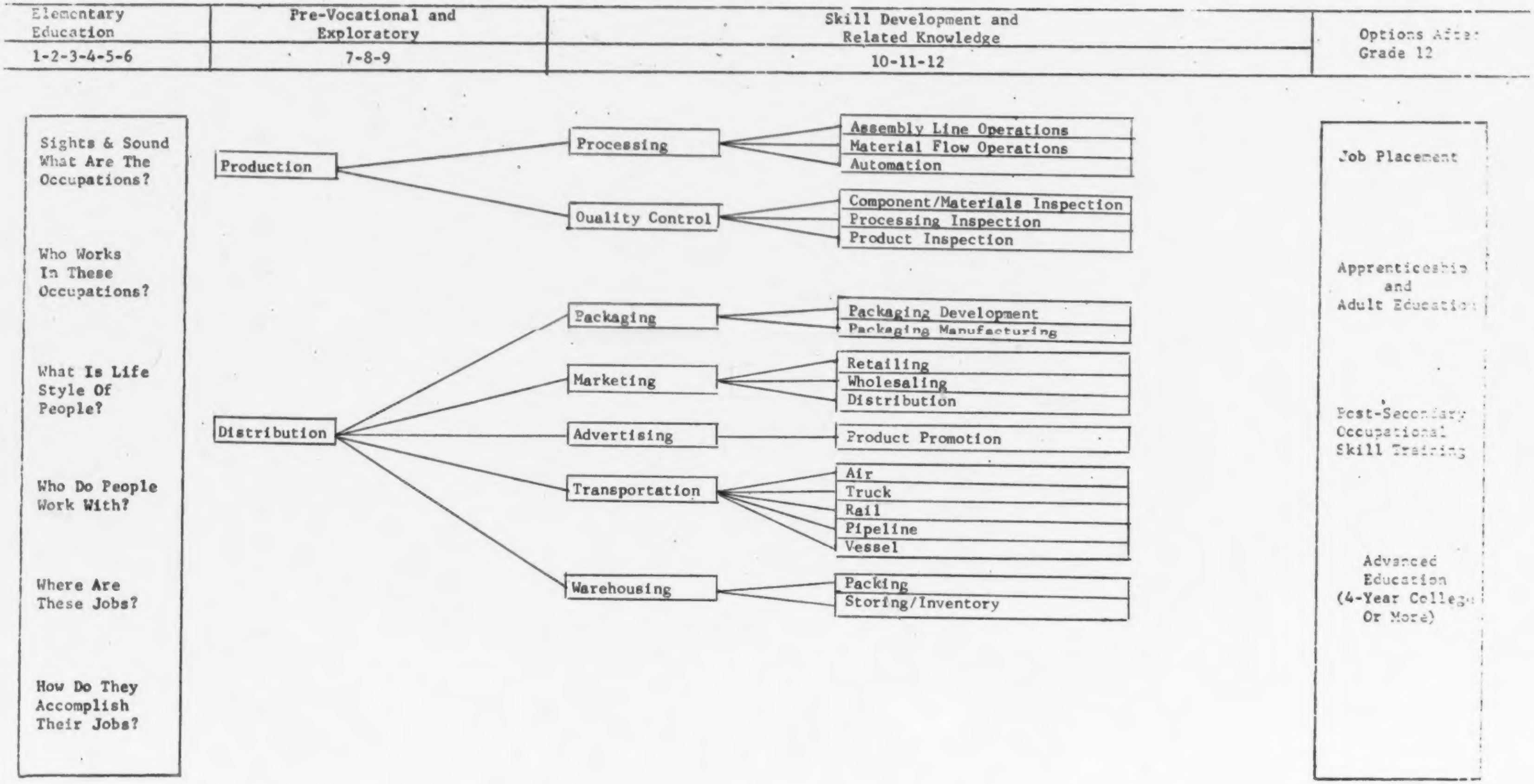
Apprenticeship
and
Adult Education

Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

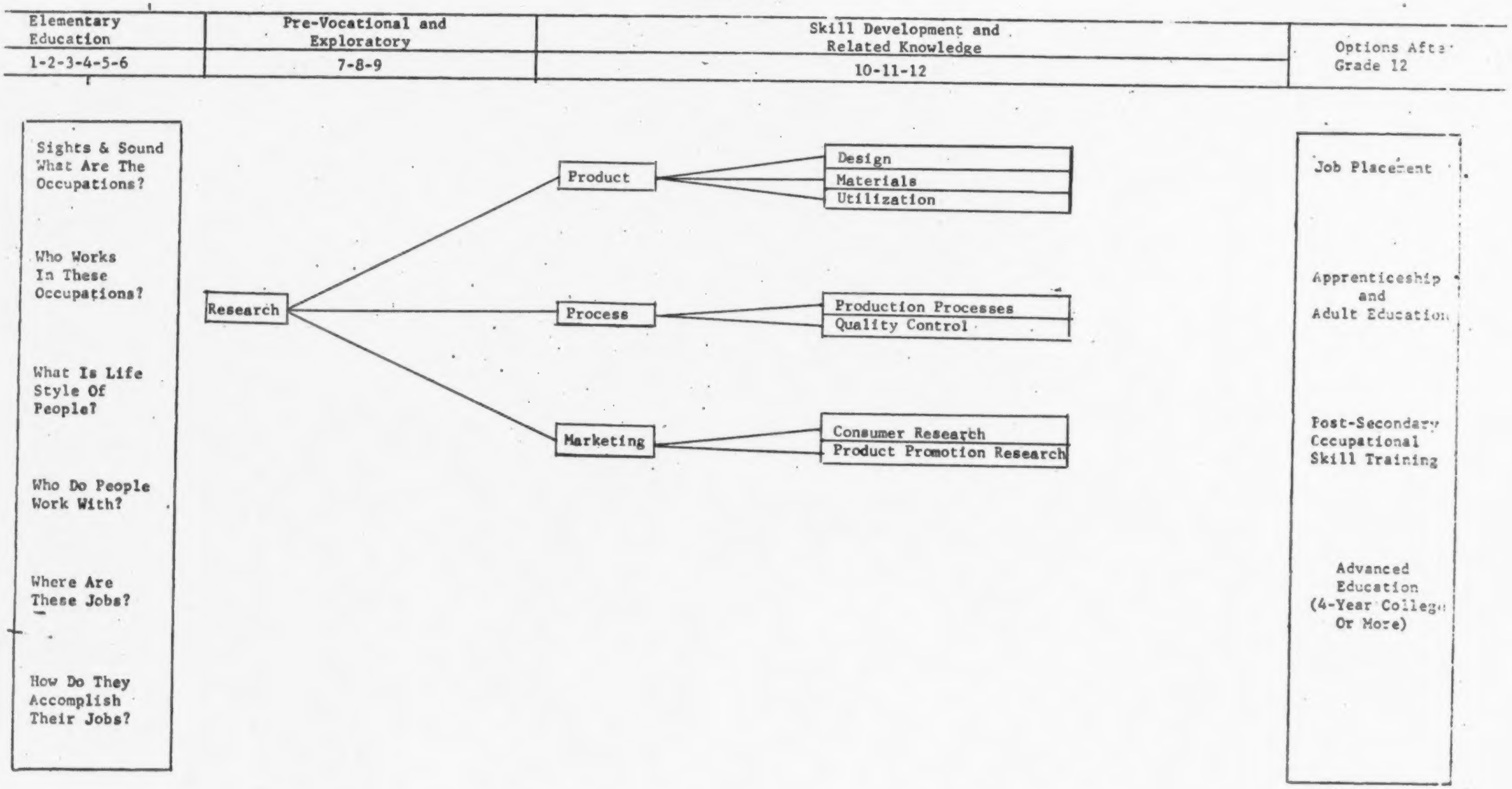
Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
MANUFACTURING



Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
MANUFACTURING

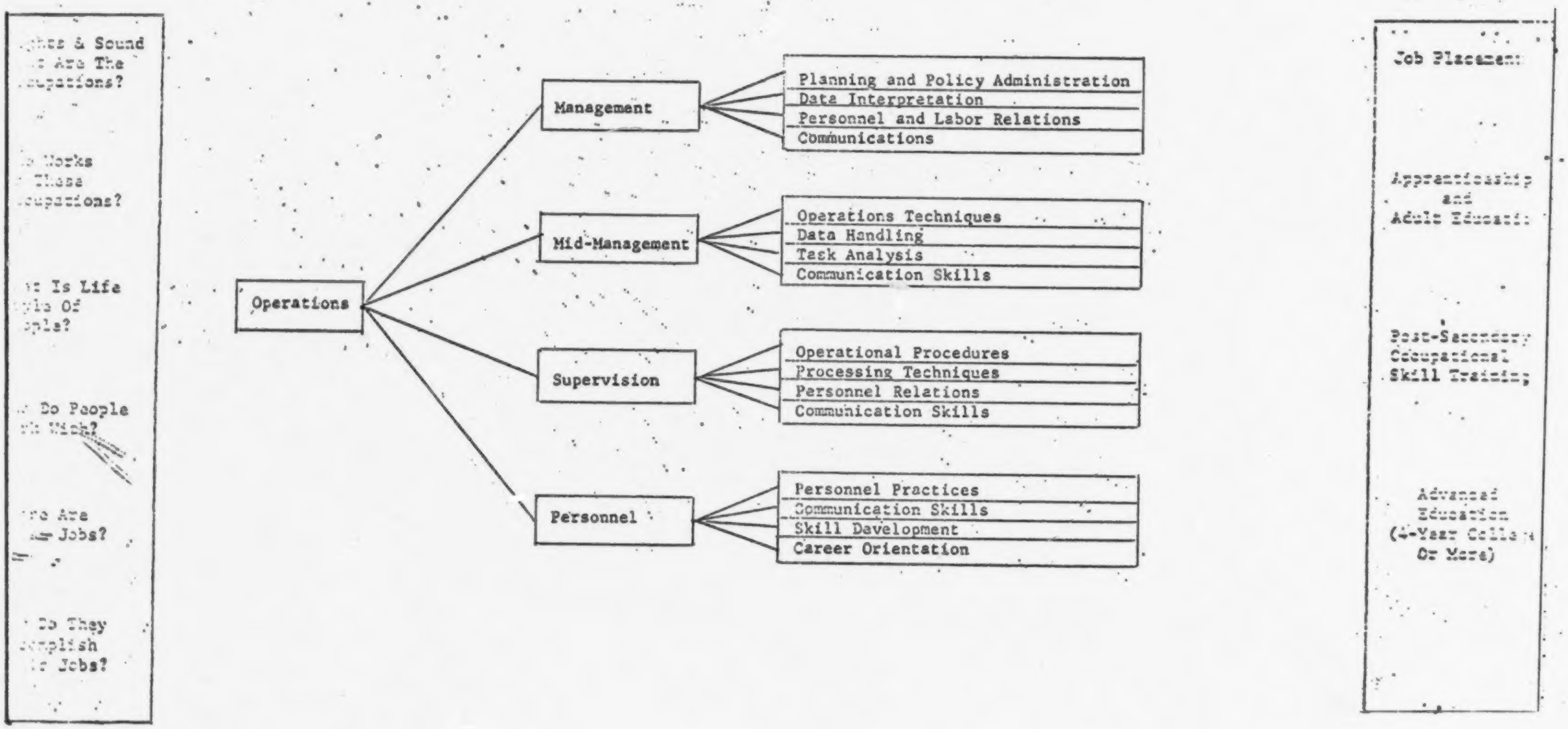

Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options Afte
Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Research
Product
Process
Marketing
Design
Materials
Utilization
Production Processes
Quality Control
Consumer Research
Product Promotion Research
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developer by: [illegible]
Draft
Revised
DATE · -1-71

Cluster for
Communication and Media

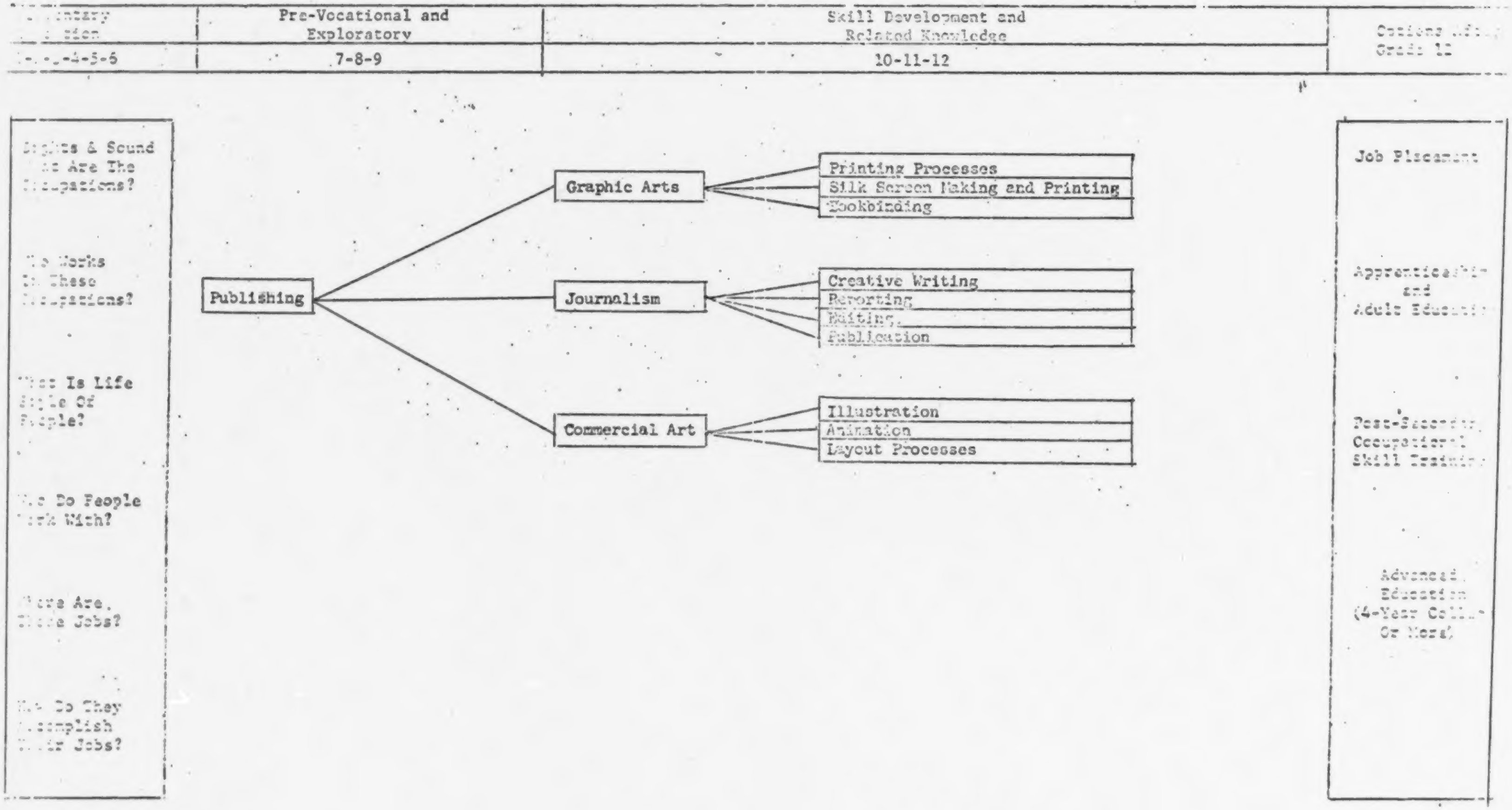
ntary ation	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
-3-4-5-6	7-8-9	10-11-12	



FILMED FROM BEST AVAILABLE COPY

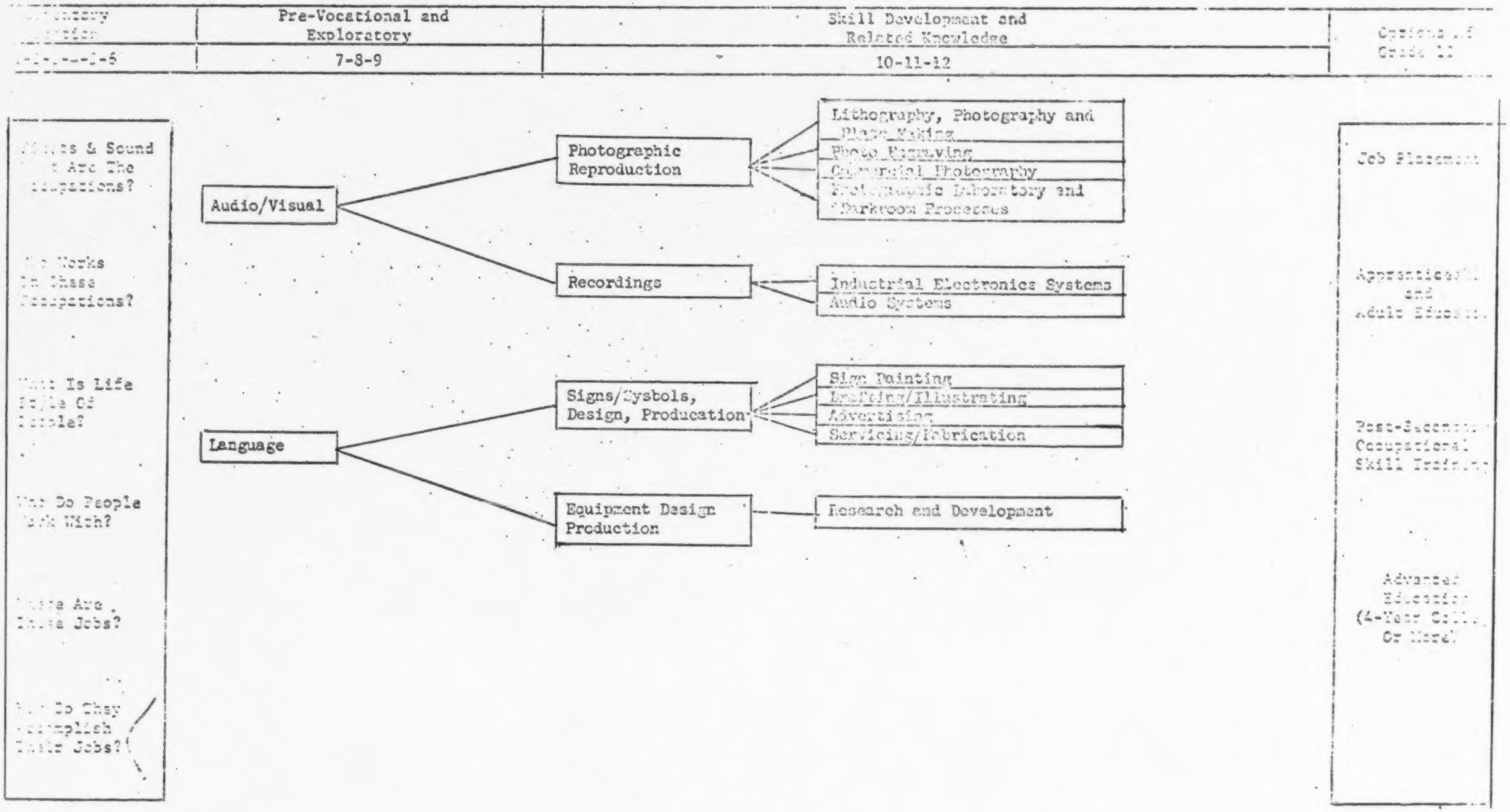
Draft
Revised
DATE 4-1-71

Cluster for
Communication and Media


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
What Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Publishing
Graphic Arts
Journalism
Commercial Art
Printing Processes
Silk Screen Making and Printing
Bookbinding
Creative Writing
Reporting
Editing
Publication
Illustration
Animation
Layout Processes
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Draft
Revised
DATE 4-1-71

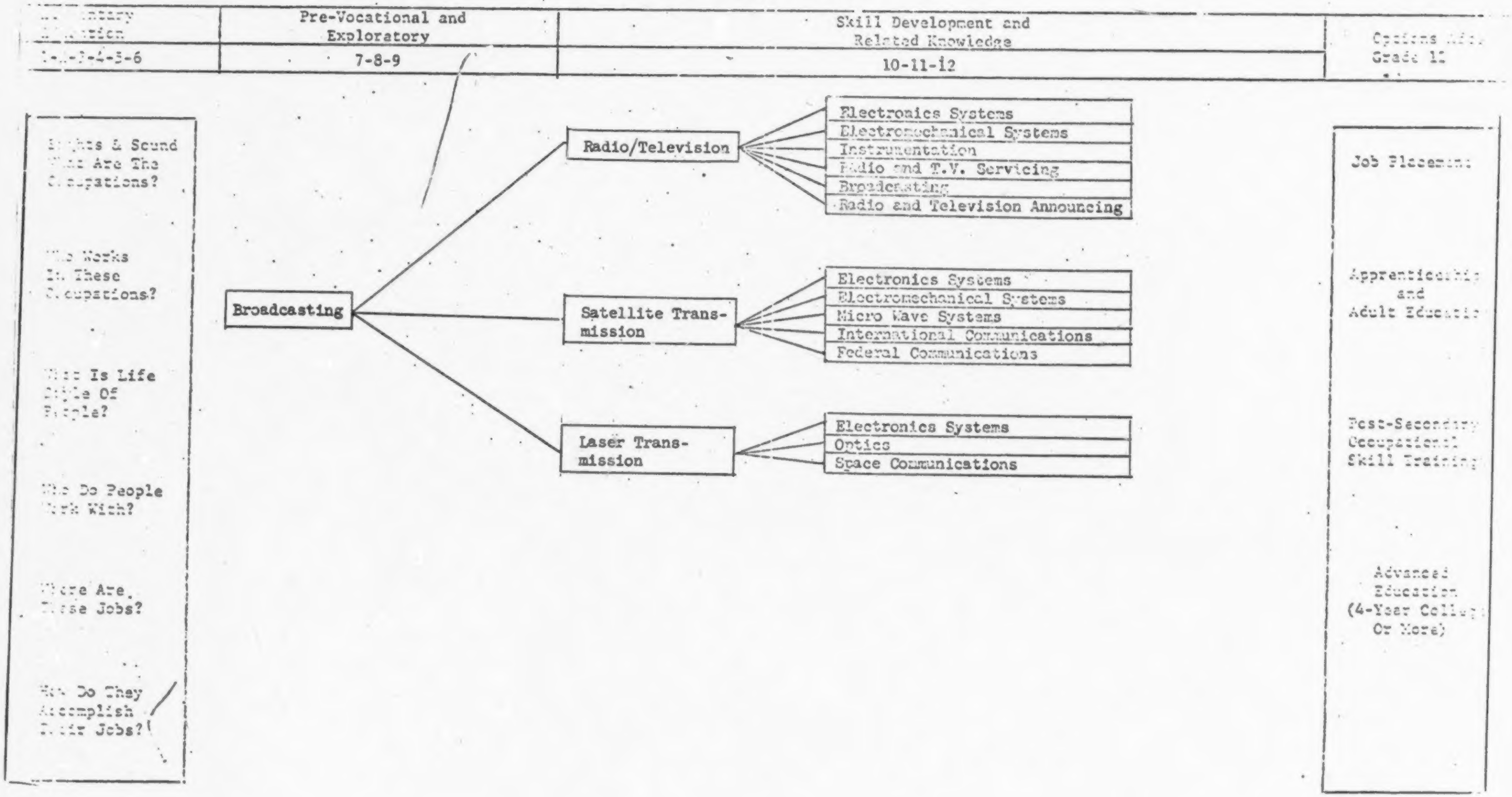
Cluster for
Communication and Media


Elementary Orientation
K-1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options of Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
What Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Audio/Visual
Language
Photographic Reproduction
Recordings
Signs/Sysbols, Design, Producation
Equipment Design Production
Lithography, Photography and Plate Making
Photo Engraving
Commercial Photography
Photographic Laboratory and Darkroom Processes
Industrial Electronics Systems
Audio Systems
Sign Painting
Drafting/Illustrating
Advertising
Servicing/Fabrication
Research and Development
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Draft
Revised
DATE 4-1-71

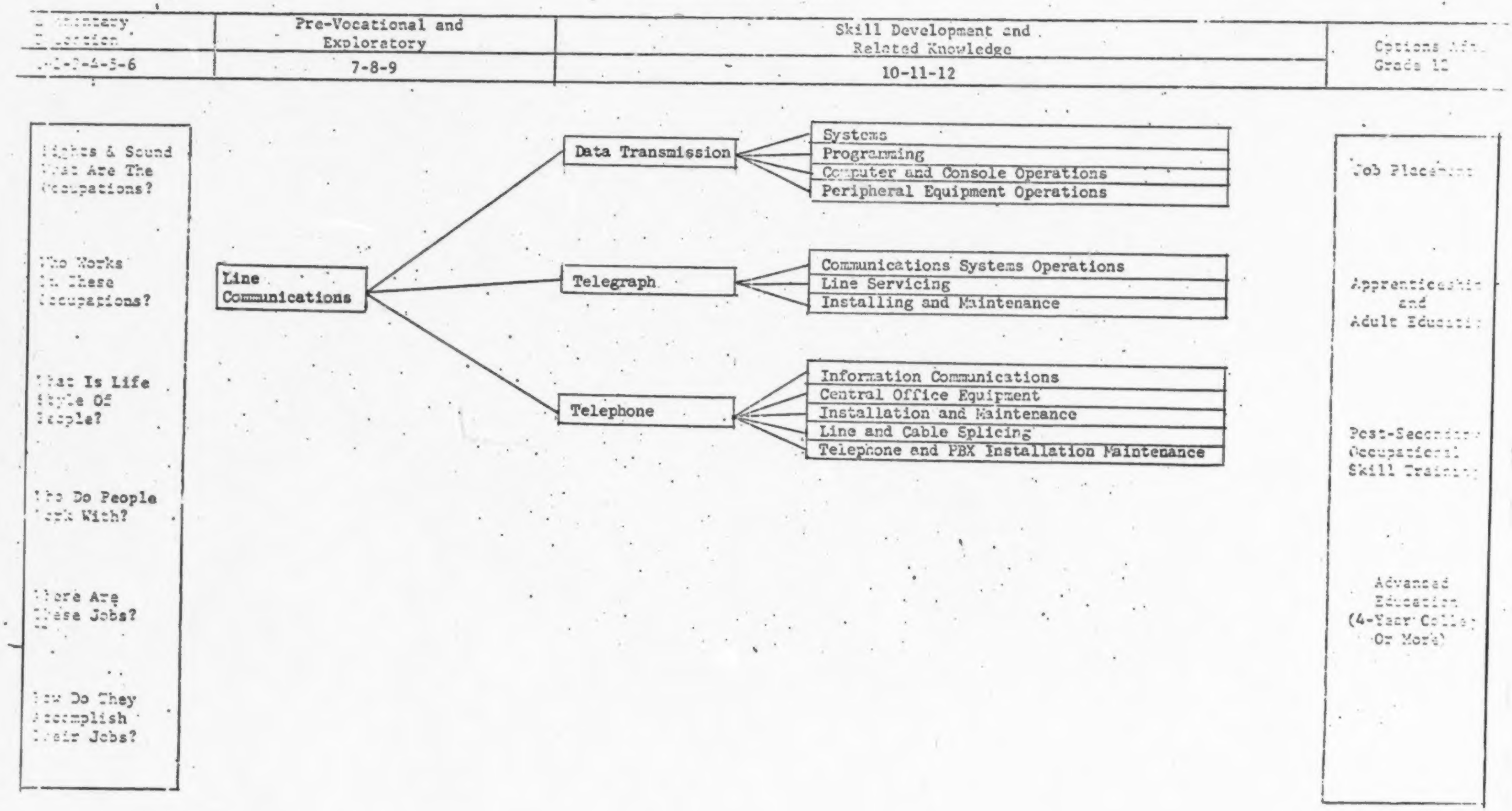
Cluster for

Communication and Media


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Broadcasting
Radio/Television
Satellite Transmission
Laser Transmission
Electronics Systems
Electromechanical Systems
Instrumentation
Radio and T.V. Servicing
Broadcasting
Radio and Television Announcing
Electronics Systems
Electromechanical Systems
Micro Wave Systems
International Communications
Federal Communications
Electronics Systems
Optics
Space Communications
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Draft
Revised
DATE 4-1-71

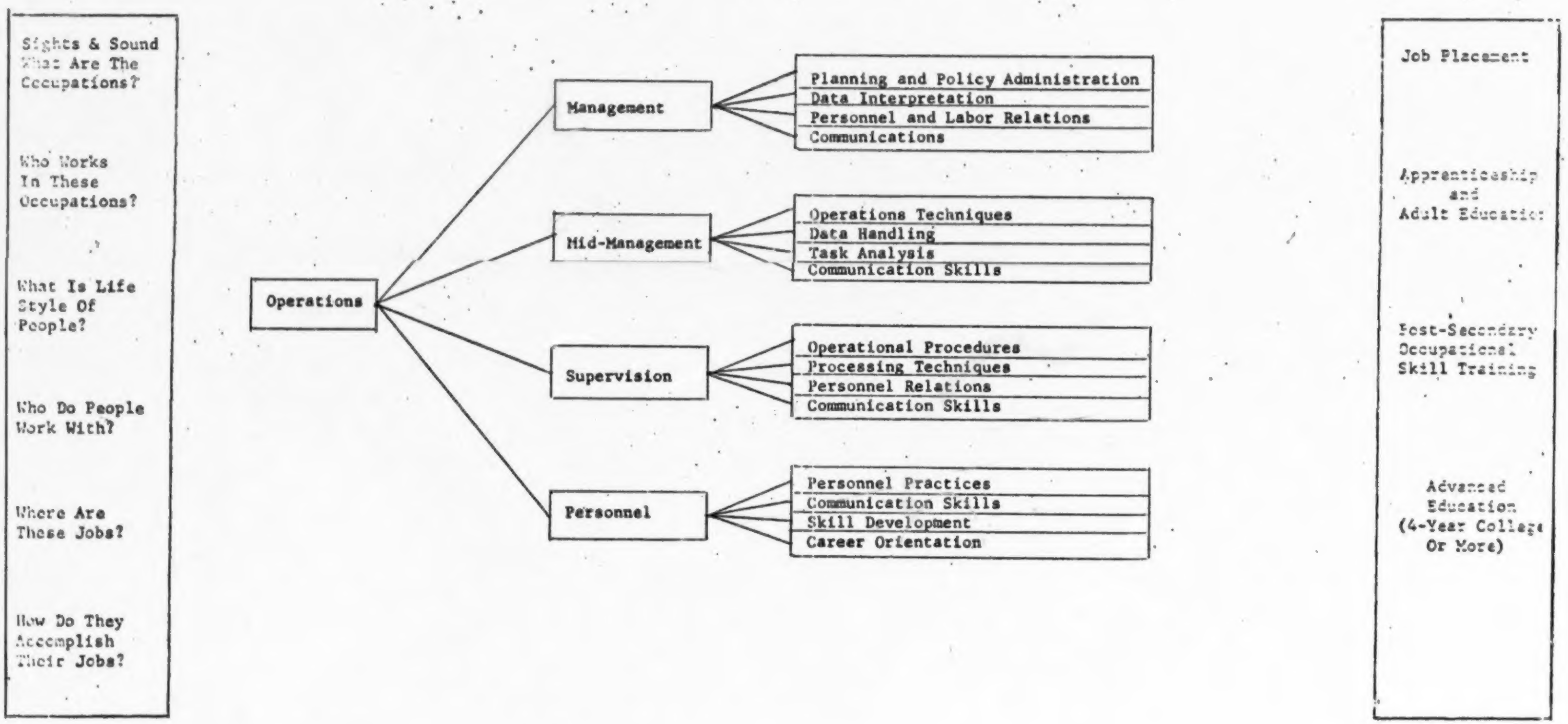
Cluster for
Communication and Media


Elementary Education
K-1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Line Communications
Data Transmission
Telegraph
Telephone
Systems
Programming
Computer and Console Operations
Peripheral Equipment Operations
Communications Systems Operations
Line Servicing
Installing and Maintenance
Information Communications
Central Office Equipment
Installation and Maintenance
Line and Cable Splicing
Telephone and PBX Installation Maintenance
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USCE[illegible]
Draft
Revised
DATE 4-1-71

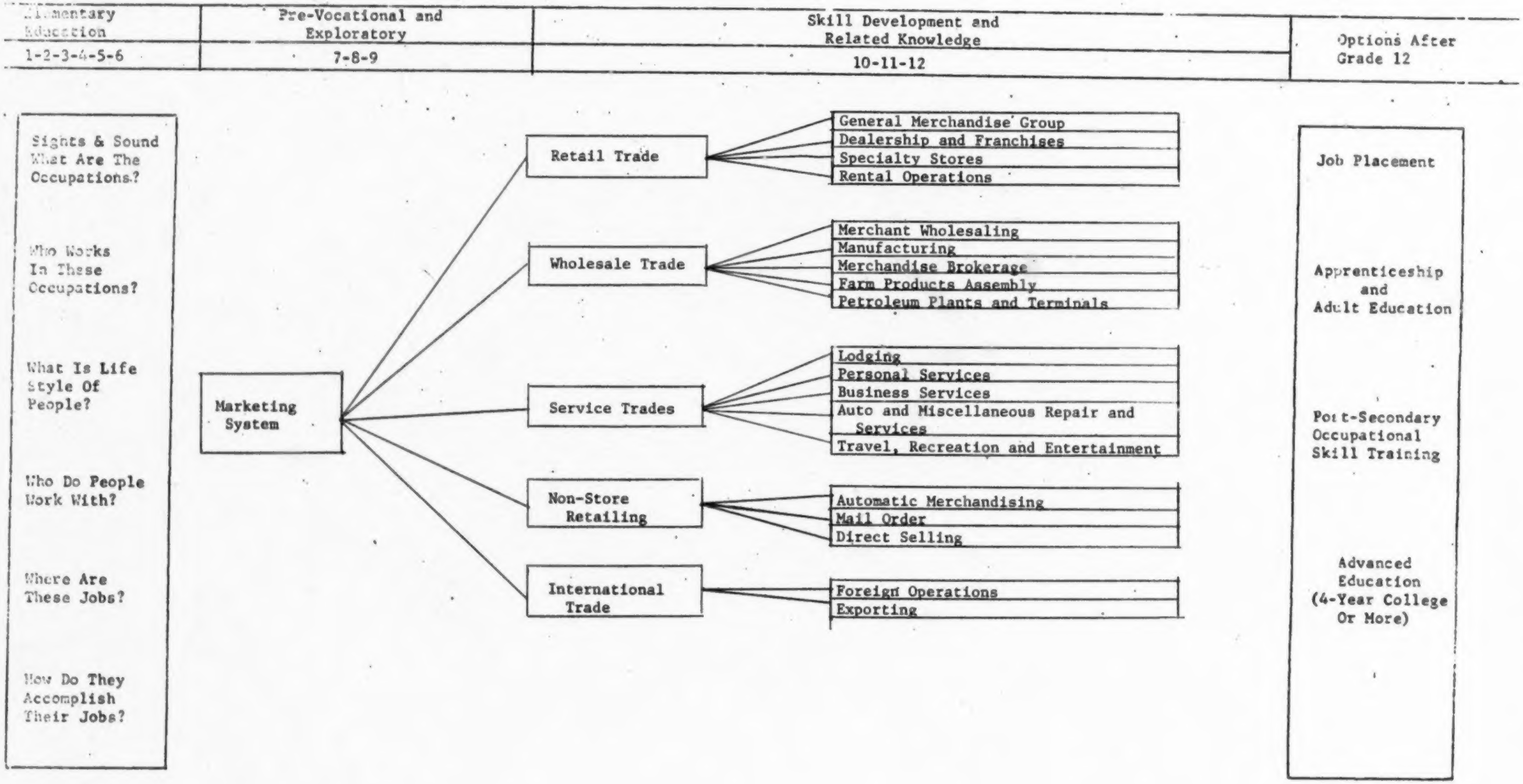
Cluster for
MARKETING AND DISTRIBUTION OCCUPATIONS

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



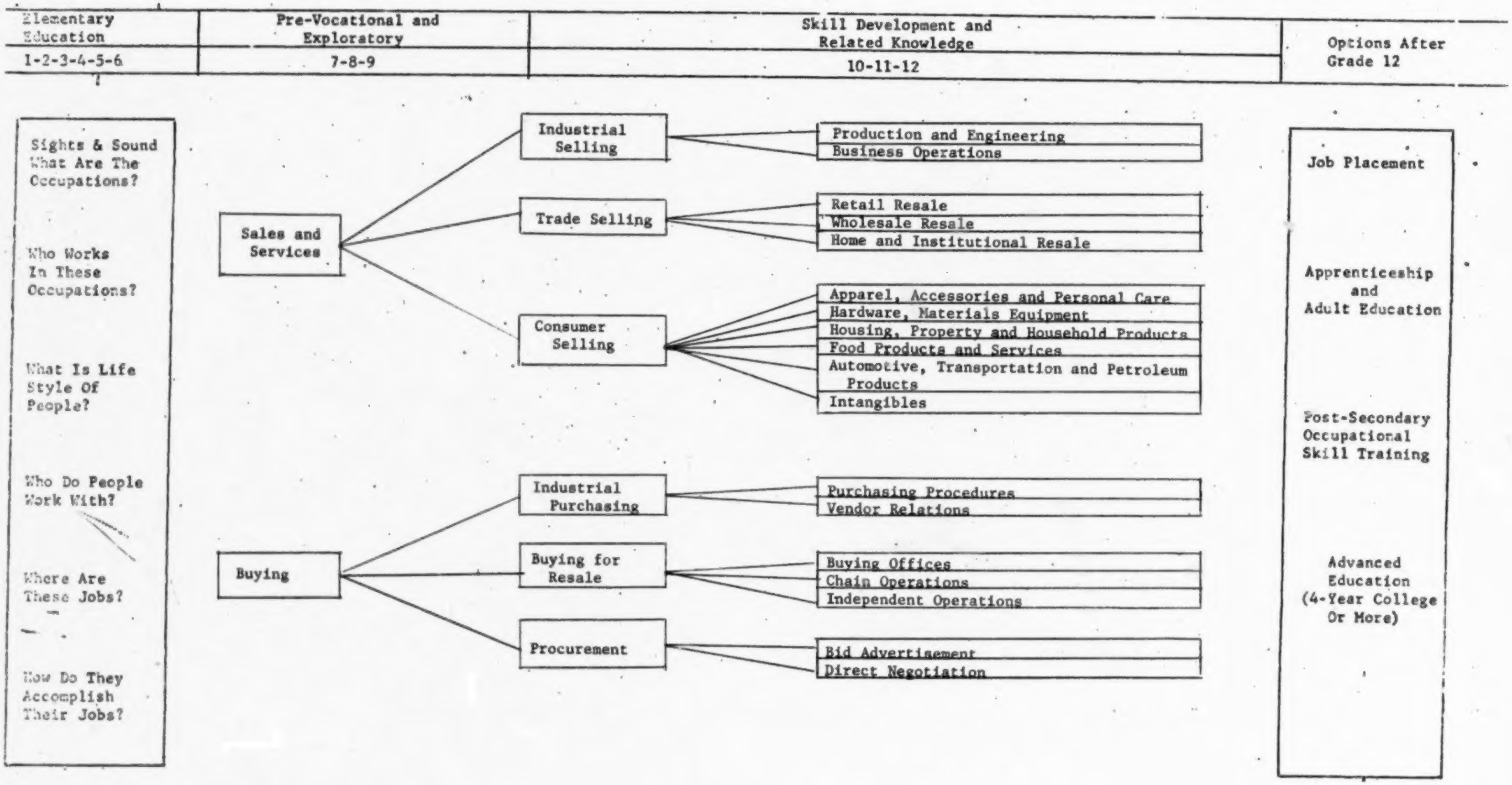
Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
Marketing and Distribution Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Marketing System
Retail Trade
Wholesale Trade
Service Trades
Non-Store Retailing
International Trade
General Merchandise Group
Dealership and Franchises
Specialty Stores
Rental Operations
Merchant Wholesaling
Manufacturing
Merchandise Brokerage
Farm Products Assembly
Petroleum Plants and Terminals
Lodging
Personal Services
Business Services
Auto and Miscellaneous Repair and Services
Travel, Recreation and Entertainment
Automatic Merchandising
Mail Order
Direct Selling
Foreign Operations
Exporting
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE4/1/71

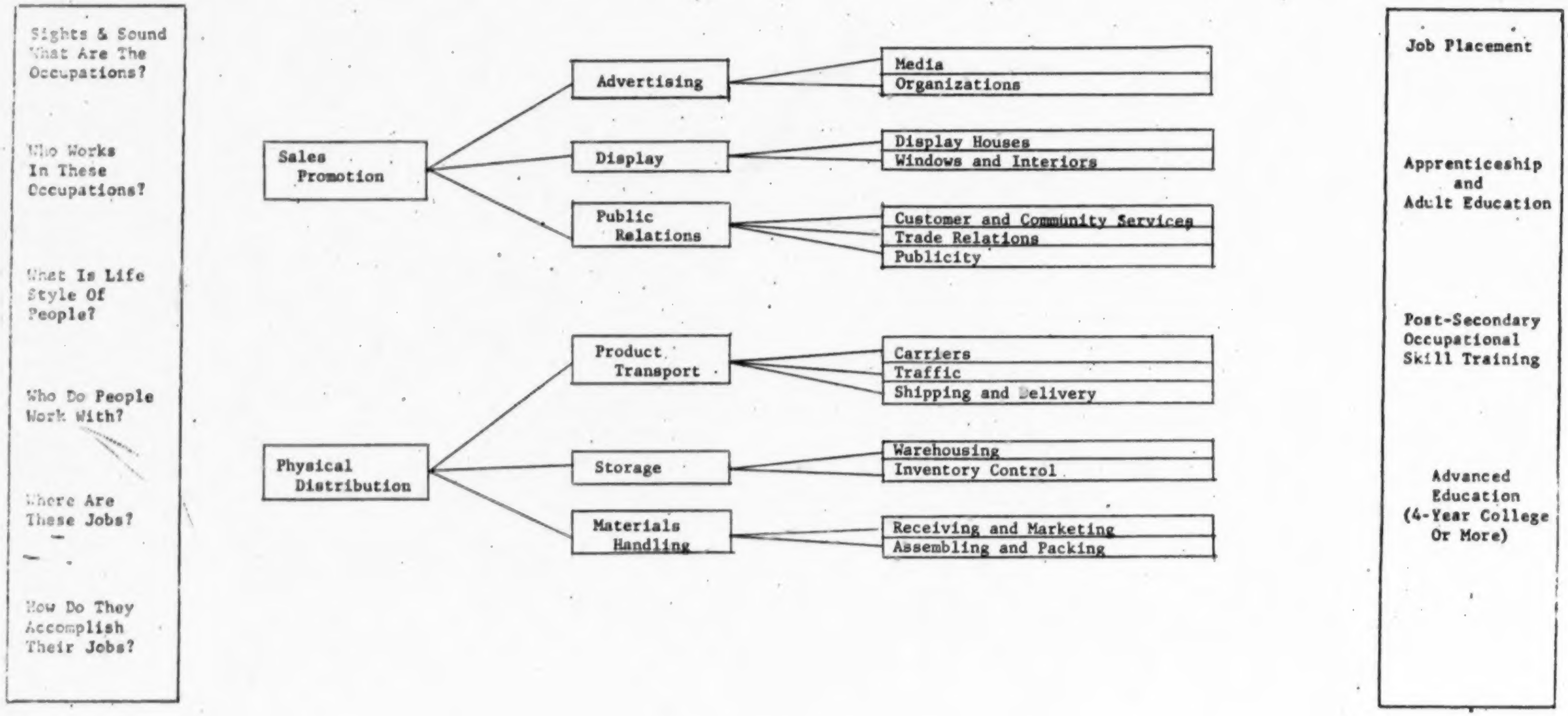
Cluster for
Marketing and Distribution Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Sales and Services
Buying
Industrial Selling
Trade Selling
Consumer Selling
Industrial Purchasing
Buying for Resale
Procurement
Production and Engineering
Business Operations
Retail Resale
Wholesale Resale
Home and Institutional Resale
Apparel, Accessories and Personal Care
Hardware, Materials Equipment
Housing, Property and Household Products
Food Products and Services
Automotive, Transportation and Petroleum Products
Intangibles
Purchasing Procedures
Vendor Relations
Buying Offices
Chain Operations
Independent Operations
Bid Advertisement
Direct Negotiation
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
Marketing and Distribution Occupations

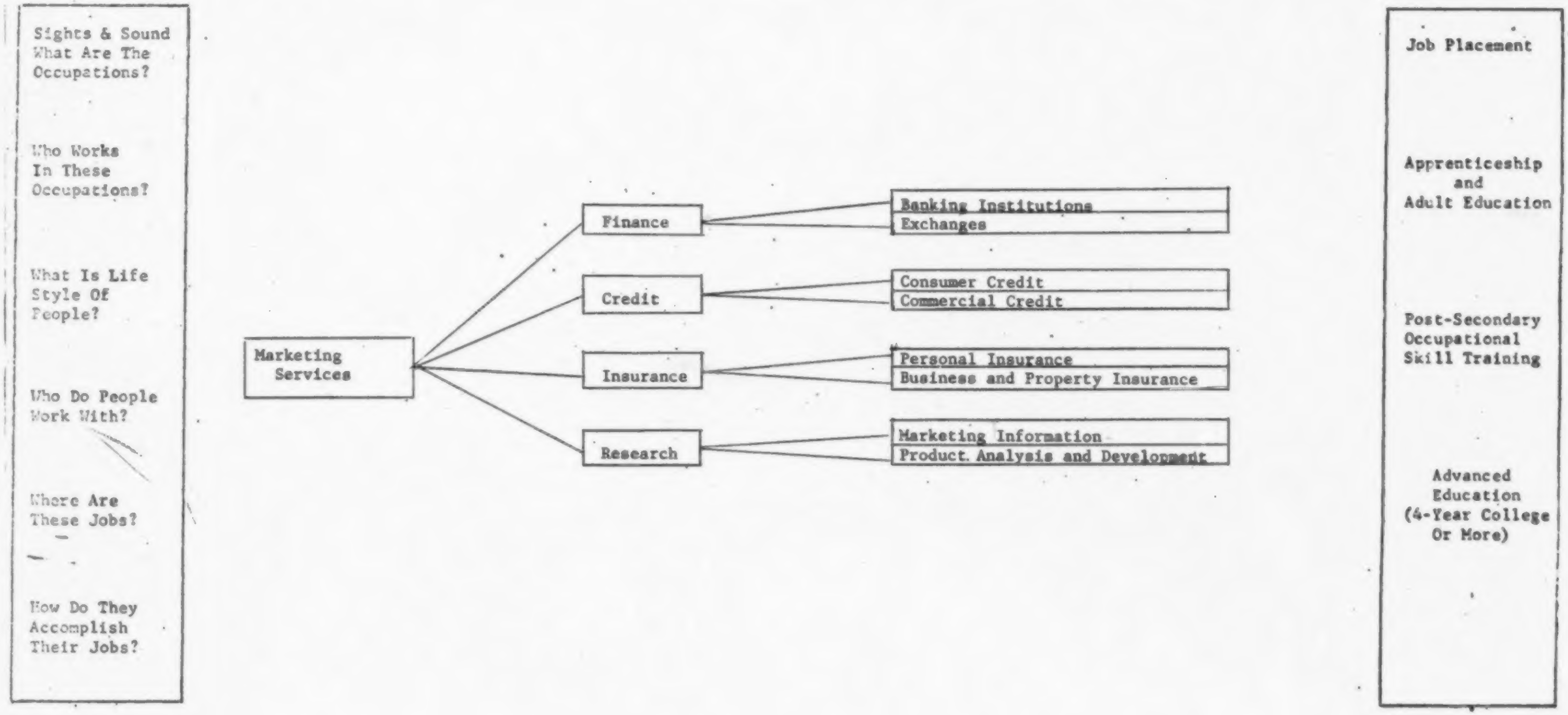
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Developed By: USOE/DVTE
Draft
Revised
DATE 4/ /71

Cluster for
Marketing and Distribution Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

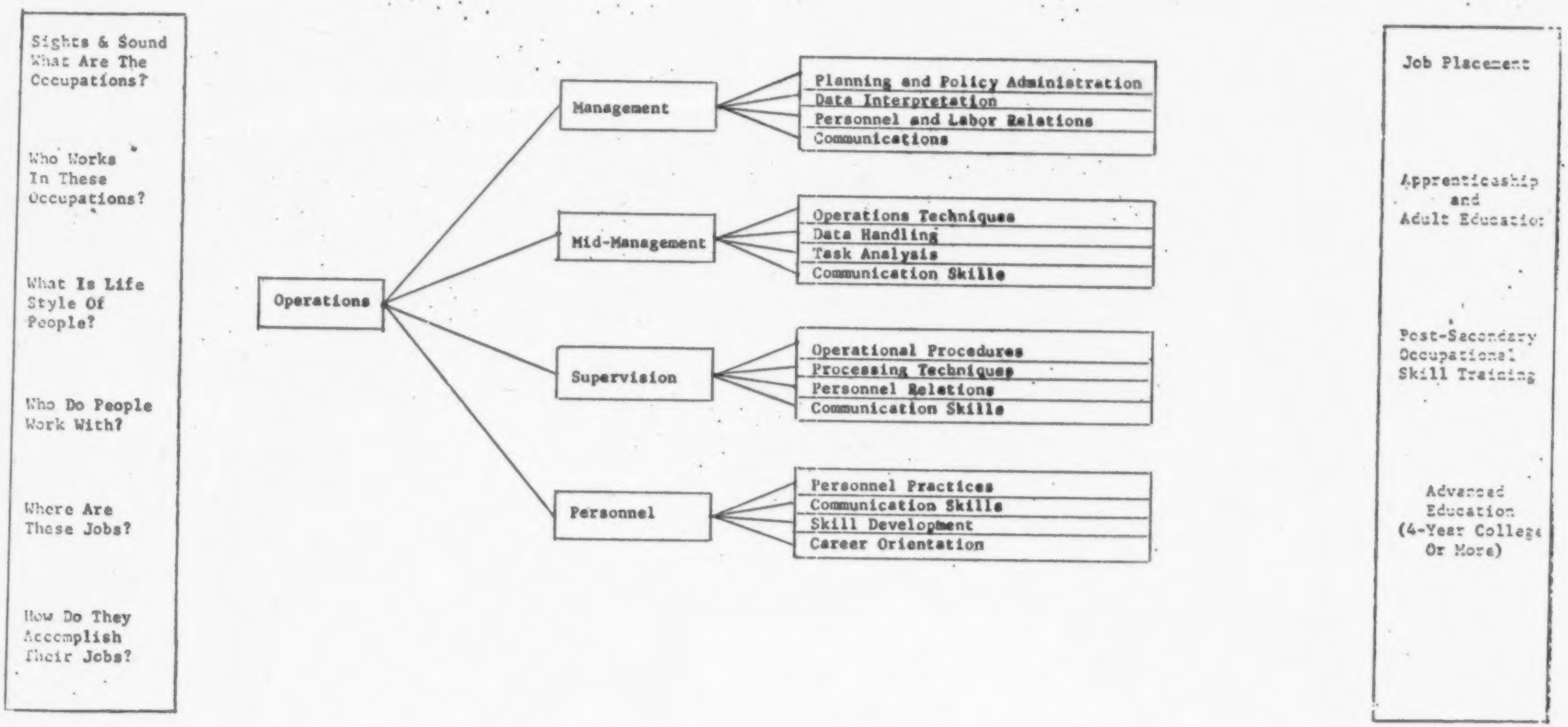

Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Marketing Services
Finance
Credit
Insurance
Research
Banking Institutions
Exchanges
Consumer Credit
Commercial Credit
Personal Insurance
Business and Property Insurance
Marketing Information
Product Analysis and Development
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed by: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
HEALTH OCCUPATIONS

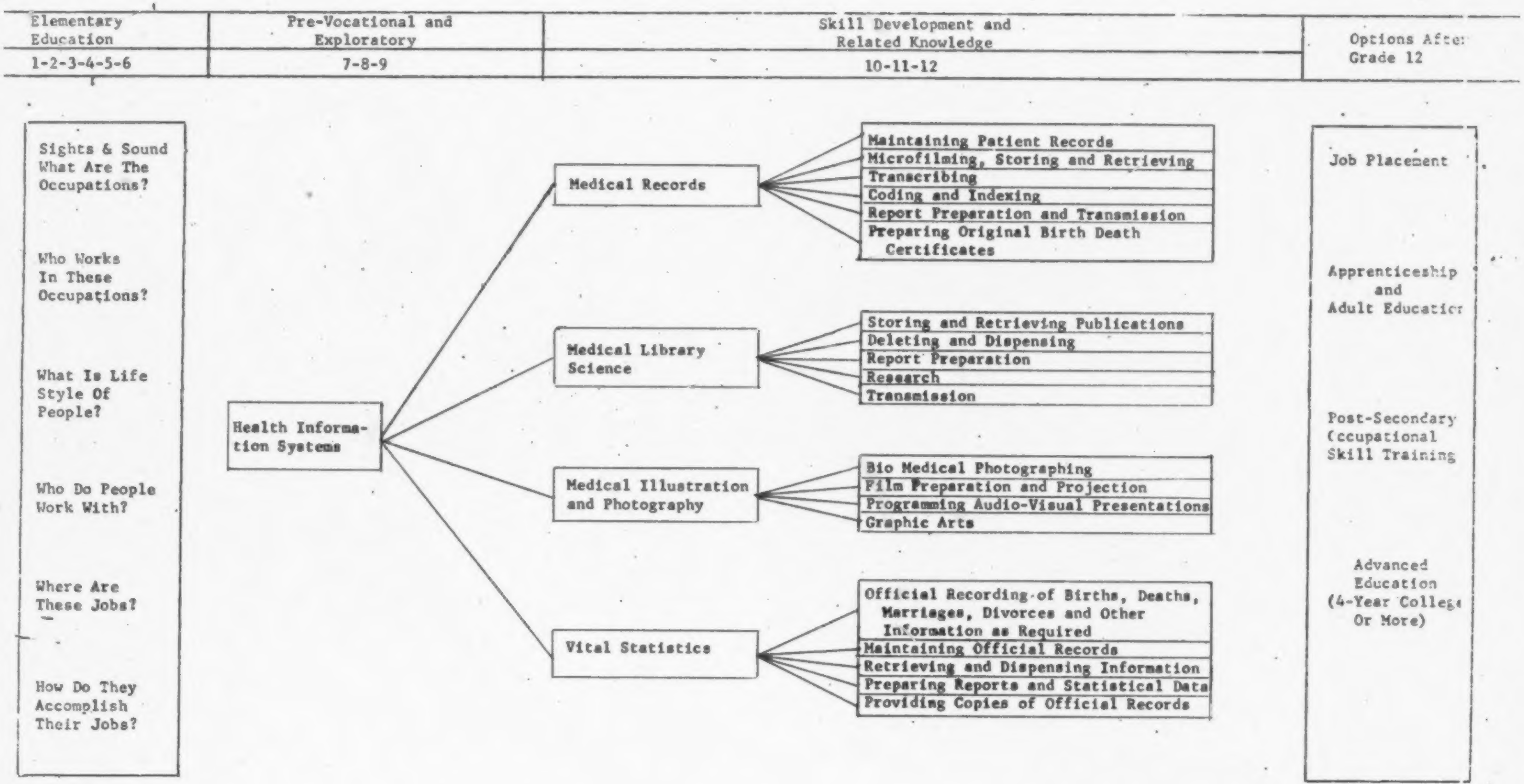
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



FILMED FROM BEST AVAILABLE COPY

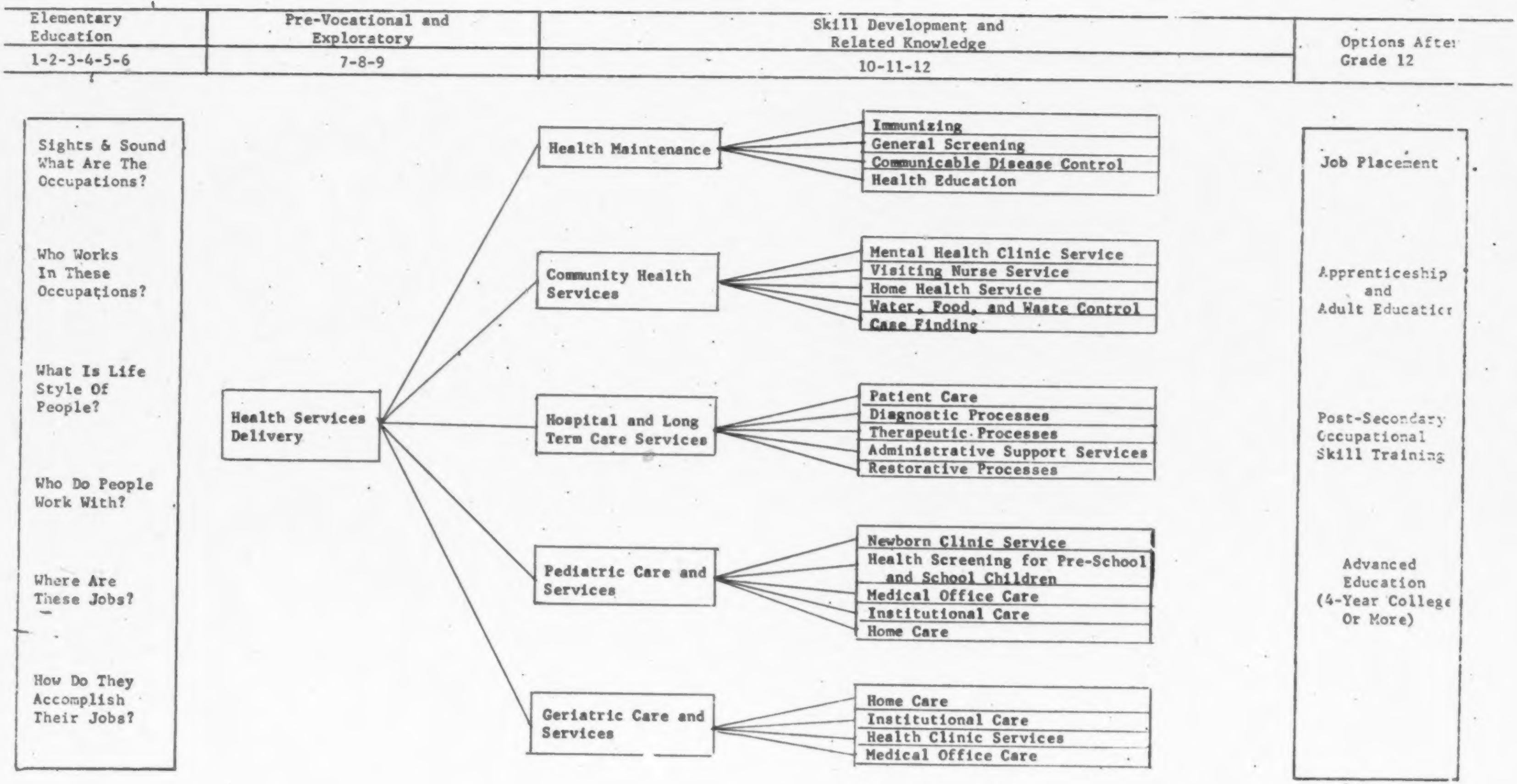
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Health Information Systems
Medical Records
Maintaining Patient Records
Microfilming, Storing and Retrieving
Transcribing
Coding and Indexing
Report Preparation and Transmission
Preparing Original Birth Death Certificates
Medical Library Science
Storing and Retrieving Publications
Deleting and Dispensing
Report Preparation
Research
Transmission
Medical Illustration and Photography
Bio Medical Photographing
Film Preparation and Projection
Programming Audio-Visual Presentations
Graphic Arts
Vital Statistics
Official Recording of Births, Deaths, Marriages, Divorces and Other Information as Required
Maintaining Official Records
Retrieving and Dispensing Information
Preparing Reports and Statistical Data
Providing Copies of Official Records
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

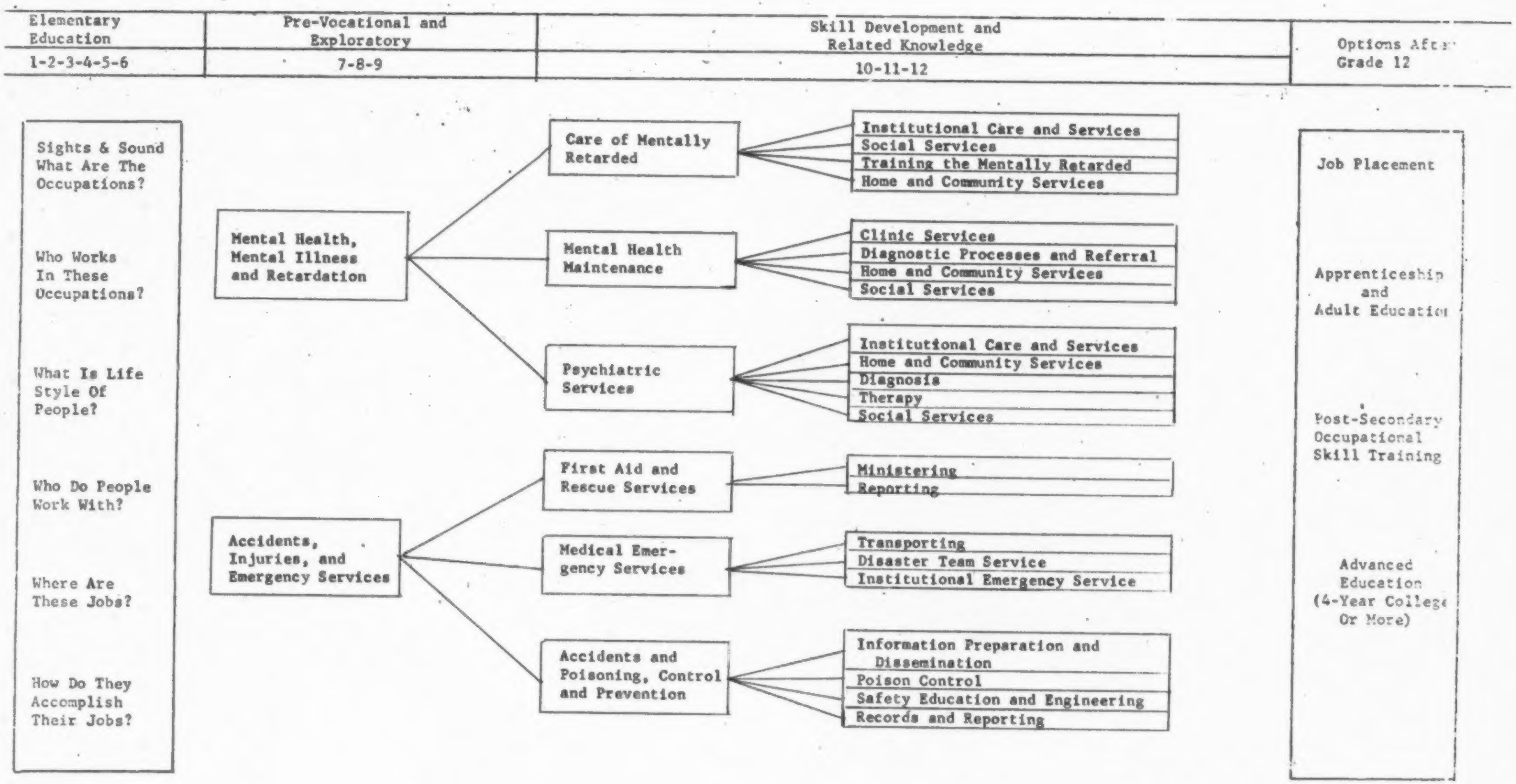
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Health Services Delivery
Health Maintenance
Immunizing
General Screening
Communicable Disease Control
Health Education
Community Health Services
Mental Health Clinic Service
Visiting Nurse Service
Home Health Service
Water, Food, and Waste Control
Case Finding
Hospital and Long Term Care Services
Patient Care
Diagnostic Processes
Therapeutic Processes
Administrative Support Services
Restorative Processes
Pediatric Care and Services
Newborn Clinic Service
Health Screening for Pre-School and School Children
Medical Office Care
Institutional Care
Home Care
Geriatric Care and Services
Home Care
Institutional Care
Health Clinic Services
Medical Office Care
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed by: USOE/DVTE
Draft
Revised
DATE 4-1-71

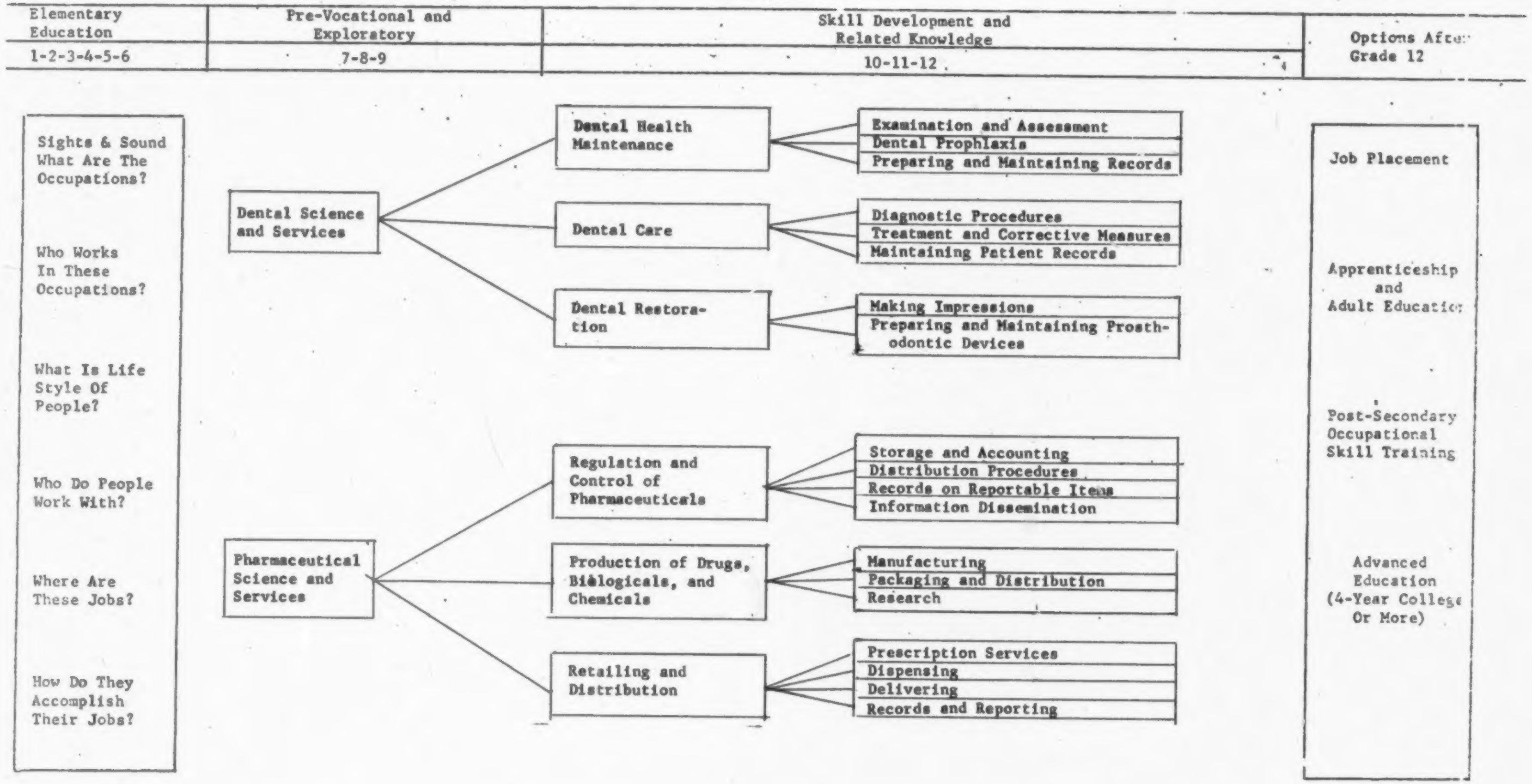
Cluster for
Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options Aft Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Mental Health, Mental Illness and Retardation
Accidents, Injuries, and Emergency Services
Care of Mentally Retarded
Mental Health Maintenance
Psychiatric Services
First Aid and Rescue Services
Medical Emergency Services
Accidents and Poisoning, Control and Prevention
Institutional Care and Services
Social Services
Training the Mentally Retarded
Home and Community Services
Clinic Services
Diagnostic Processes and Referral
Home and Community Services
Social Services
Institutional Care and Services
Home and Community Services
Diagnosis
Therapy
Social Services
Ministering
Reporting
Transporting
Disaster Team Service
Institutional Emergency Service
Information Preparation and Dissemination
Poison Control
Safety Education and Engineering
Records and Reporting
Job Placement
Apprenticeship and Adult Educatio
Post-Secondary Occupational Skill Training
Advanced Education (4-Year Colleg Or More)

FILMED FROM BEST AVAILABLE COPY

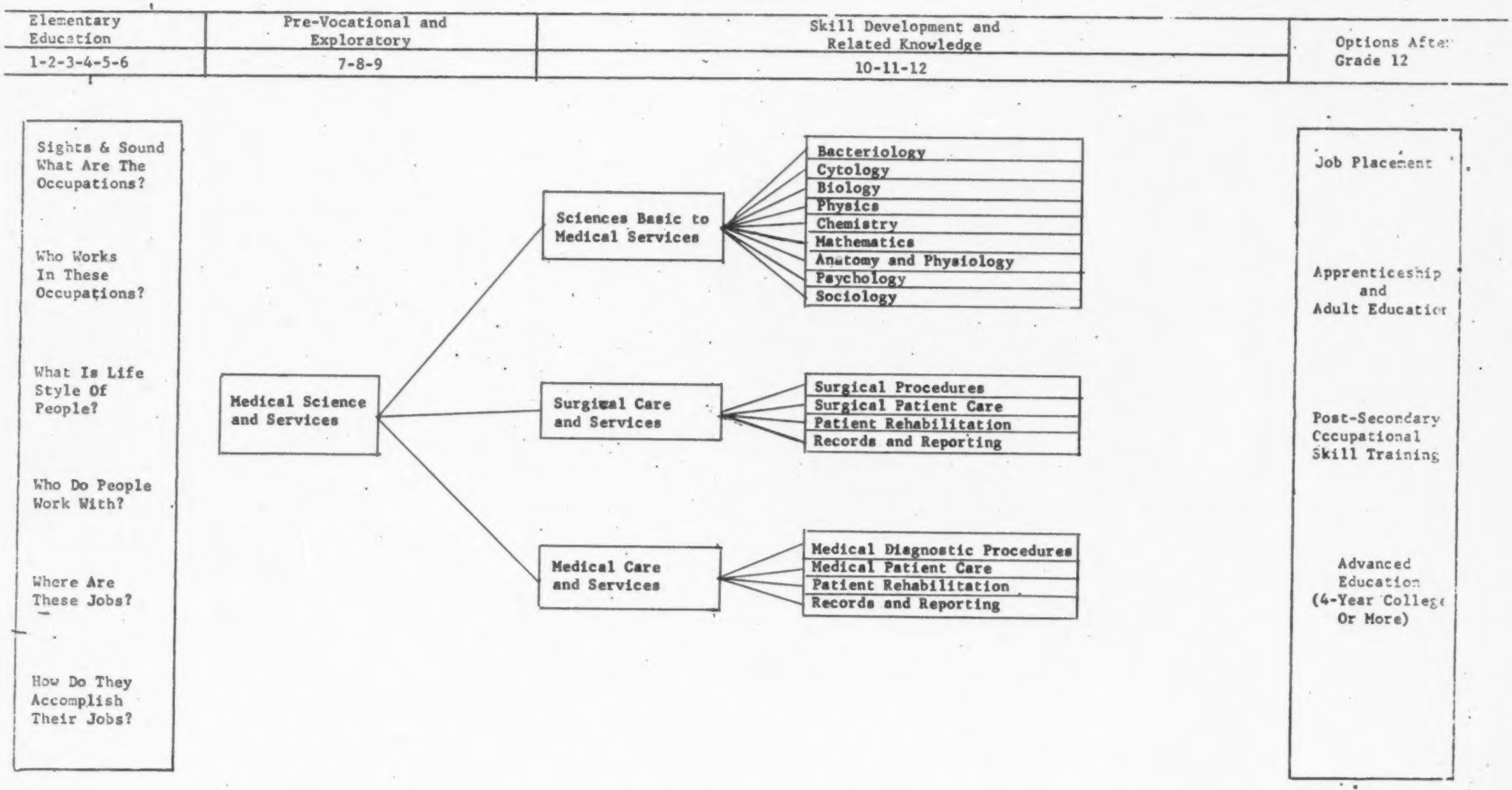
Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for
Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options Afte Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Dental Science and Services
Dental Health Maintenance
Examination and Assessment
Dental Prophlaxis
Preparing and Maintaining Records
Dental Care
Diagnostic Procedures
Treatment and Corrective Measures
Maintaining Patient Records
Dental Restoration
Making Impressions
Preparing and Maintaining Prosthodontic Devices
Pharmaceutical Science and Services
Regulation and Control of Pharmaceuticals
Storage and Accounting
Distribution Procedures
Records on Reportable Items
Information Dissemination
Production of Drugs, Biologicals, and Chemicals
Manufacturing
Packaging and Distribution
Research
Retailing and Distribution
Prescription Services
Dispensing
Delivering
Records and Reporting
Job Placement
Apprenticeship and Adult Educatio
Post-Secondary Occupational Skill Training
Advanced Education (4-Year Colleg Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

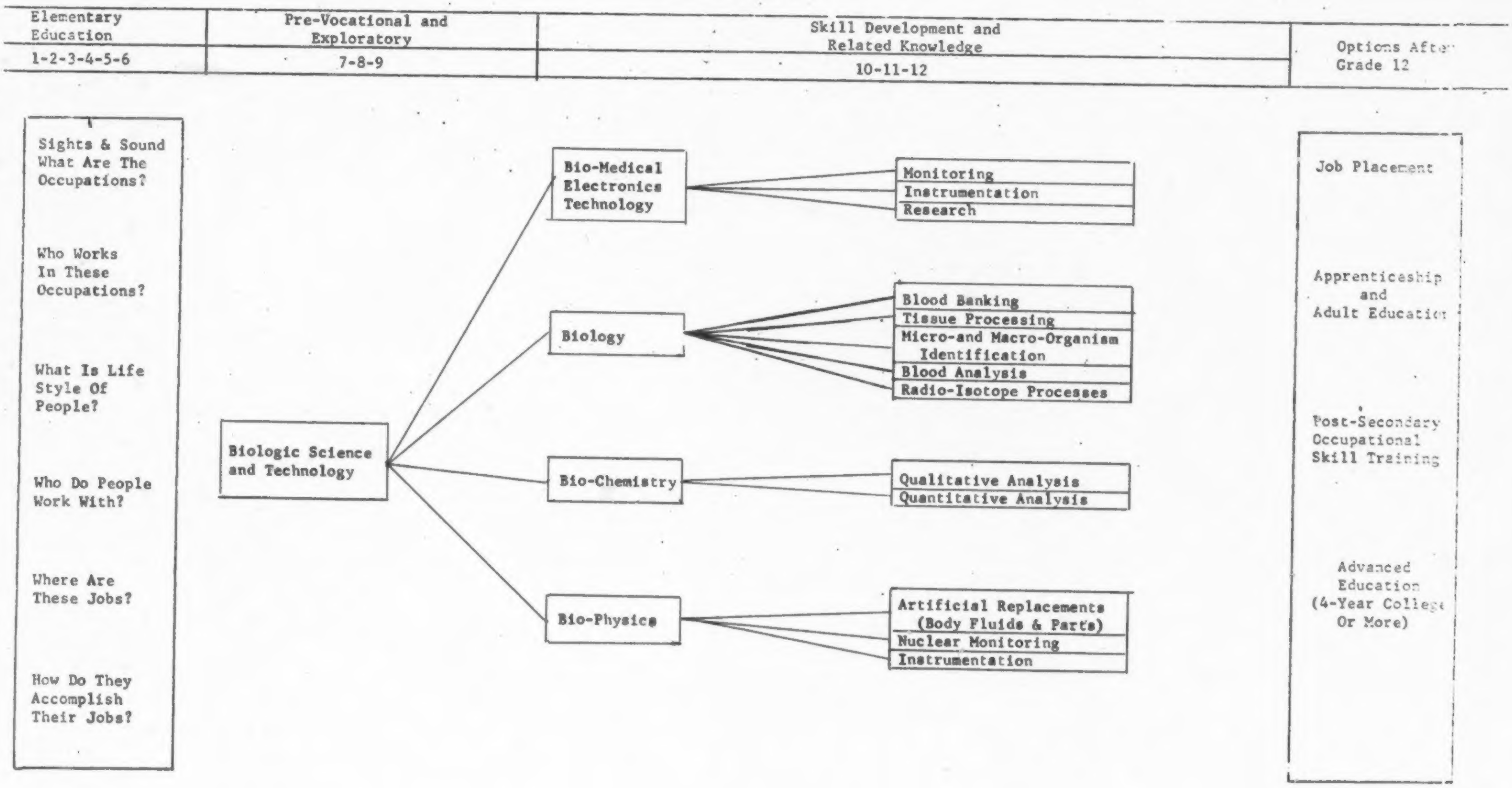
Cluster for
Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Medical Science and Services
Sciences Basic to Medical Services
Surgical Care and Services
Medical Care and Services
Bacteriology
Cytology
Biology
Physics
Chemistry
Mathematics
Anatomy and Physiology
Psychology
Sociology
Surgical Procedures
Surgical Patient Care
Patient Rehabilitation
Records and Reporting
Medical Diagnostic Procedures
Medical Patient Care
Patient Rehabilitation
Records and Reporting
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

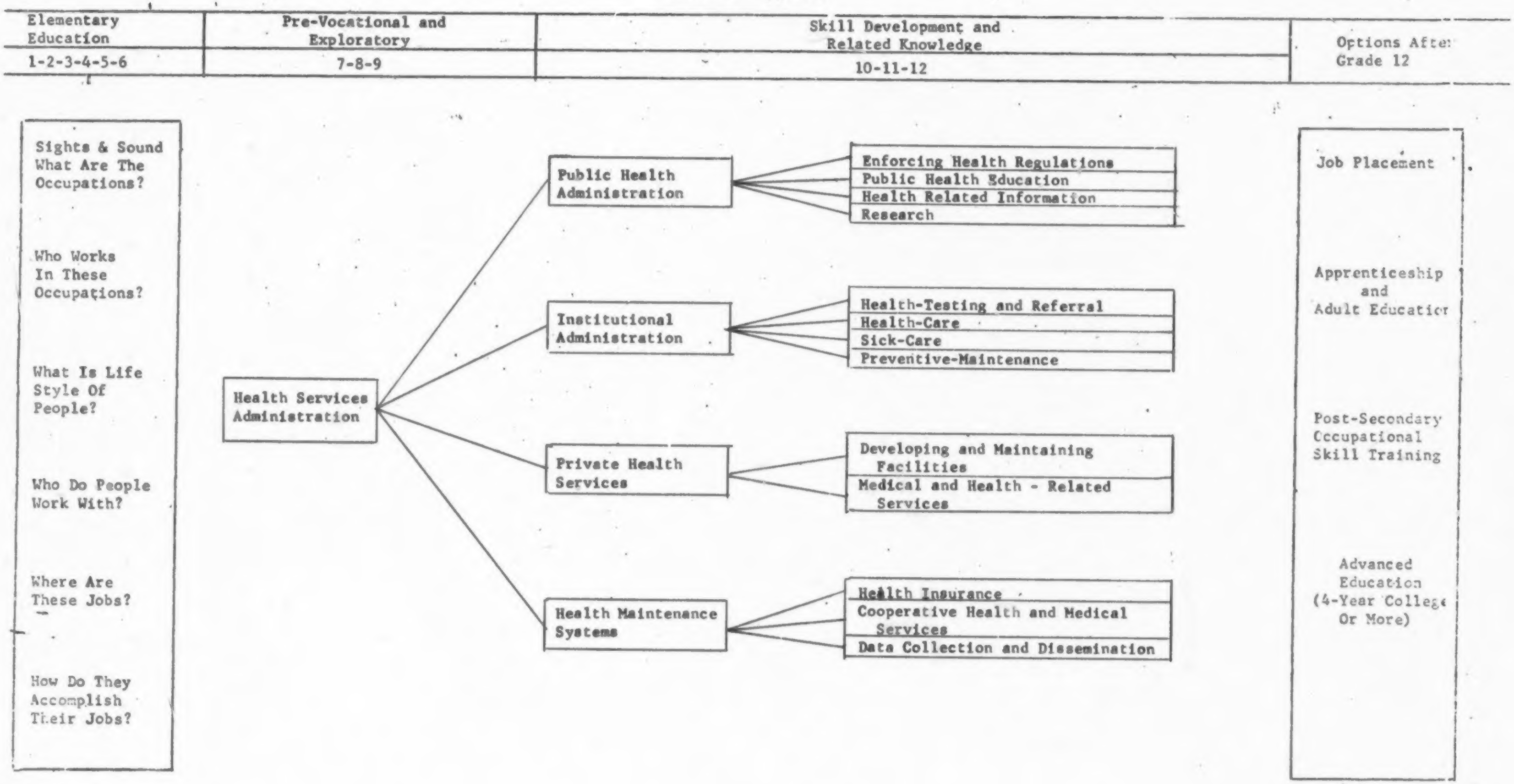
Cluster for
Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Biologic Science and Technology
Bio-Medical Electronics Technology
Biology
Bio-Chemistry
Bio-Physics
Monitoring
Instrumentation
Research
Blood Banking
Tissue Processing
Micro-and Macro-Organism Identification
Blood Analysis
Radio-Isotope Processes
Qualitative Analysis
Quantitative Analysis
Artificial Replacements (Body Fluids & Parts)
Nuclear Monitoring
Instrumentation
Job Placement
Apprenticeship and Adult Educatio
Post-Secondary Occupational Skill Training
Advanced Education (4-Year Colleg Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4-1-71

Cluster for

Health Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Health Services Administration
Public Health Administration
Institutional Administration
Private Health Services
Health Maintenance Systems
Enforcing Health Regulations
Public Health Education
Health Related Information
Research
Health-Testing and Referral
Health-Care
Sick-Care
Preventive-Maintenance
Developing and Maintaining Facilities
Medical and Health - Related Services
Health Insurance
Cooperative Health and Medical Services
Data Collection and Dissemination
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed by: USOE [illegible]
Draft
Revised
DATE 4-1-71

Cluster for
PERSONAL SERVICES OCCUPATIONS

Elementary Orientation	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

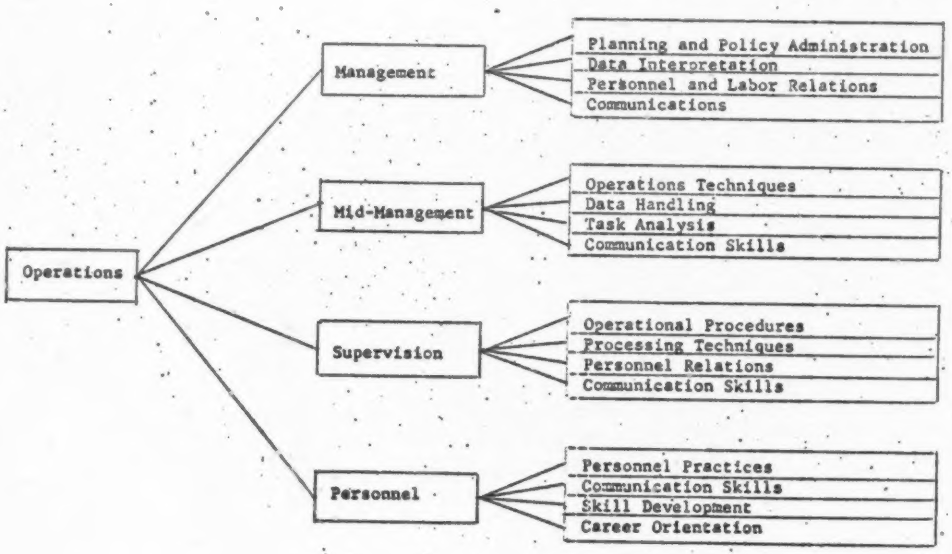
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

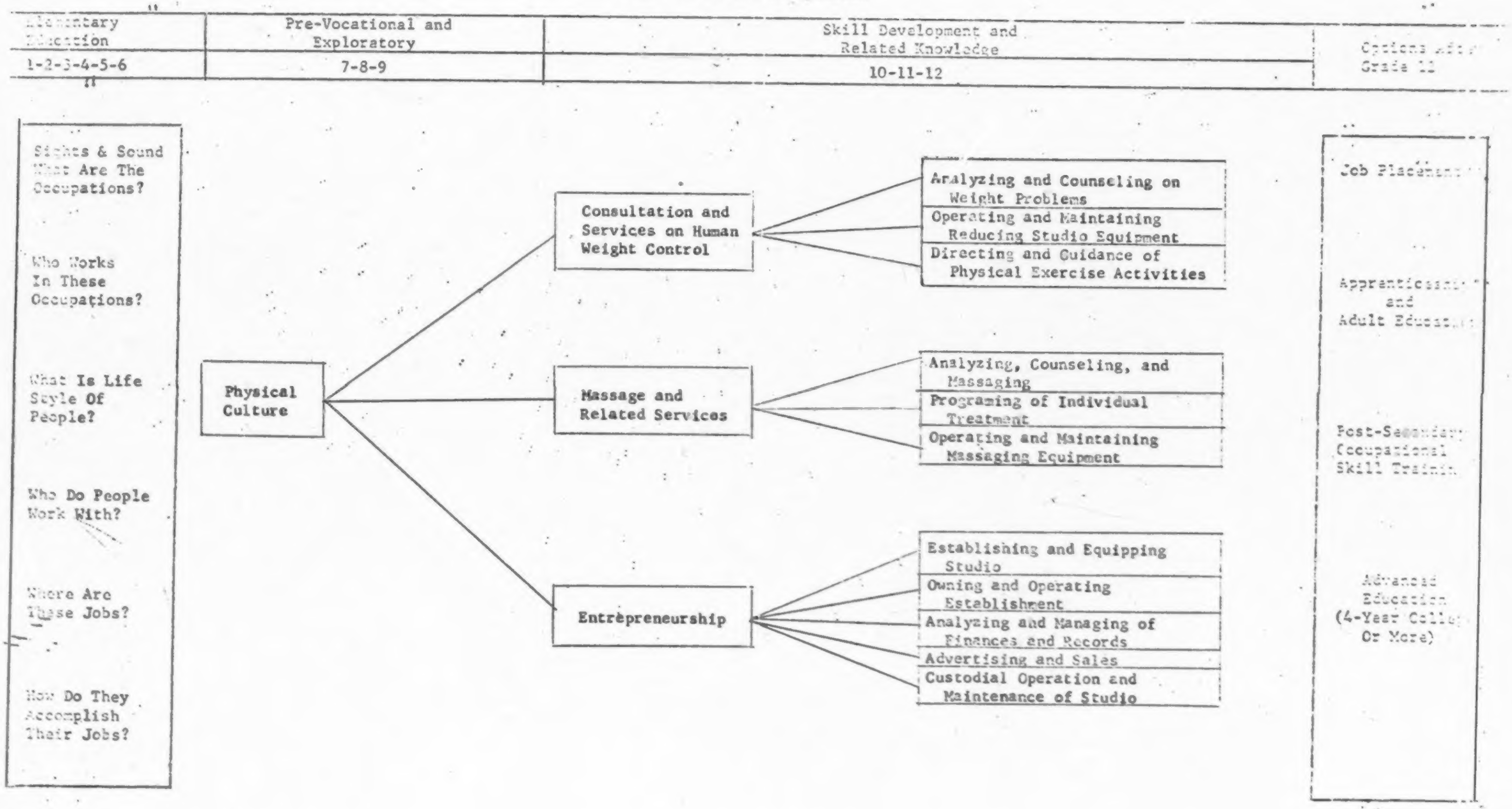
Apprenticeship and Adult Education

Post-Secondary Occupational Skill Training

Advanced Education (4-Year College Or More)

Developed by: [illegible]
Draft
Revised
DATE 4/1/71

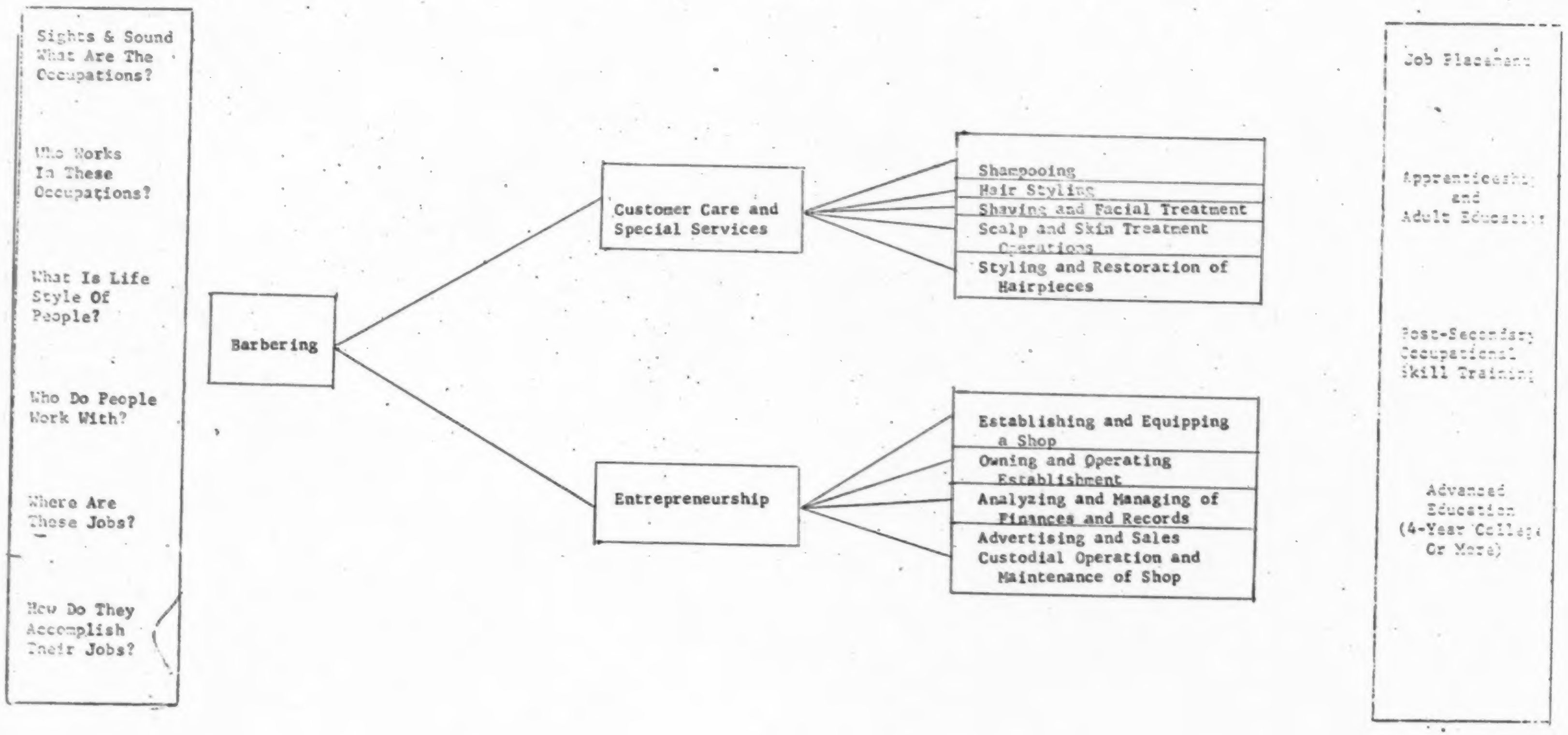
Cluster for
Personal Service Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Physical Culture
Consultation and Services on Human Weight Control
Massage and Related Services
Entrepreneurship
Analyzing and Counseling on Weight Problems
Operating and Maintaining Reducing Studio Equipment
Directing and Guidance of Physical Exercise Activities
Analyzing, Counseling, and Massaging
Programing of Individual Treatment
Operating and Maintaining Massaging Equipment
Establishing and Equipping Studio
Owning and Operating Establishment
Analyzing and Managing of Finances and Records
Advertising and Sales
Custodial Operation and Maintenance of Studio
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed by: [illegible]
Draft
Revised
DATE 4/1/71

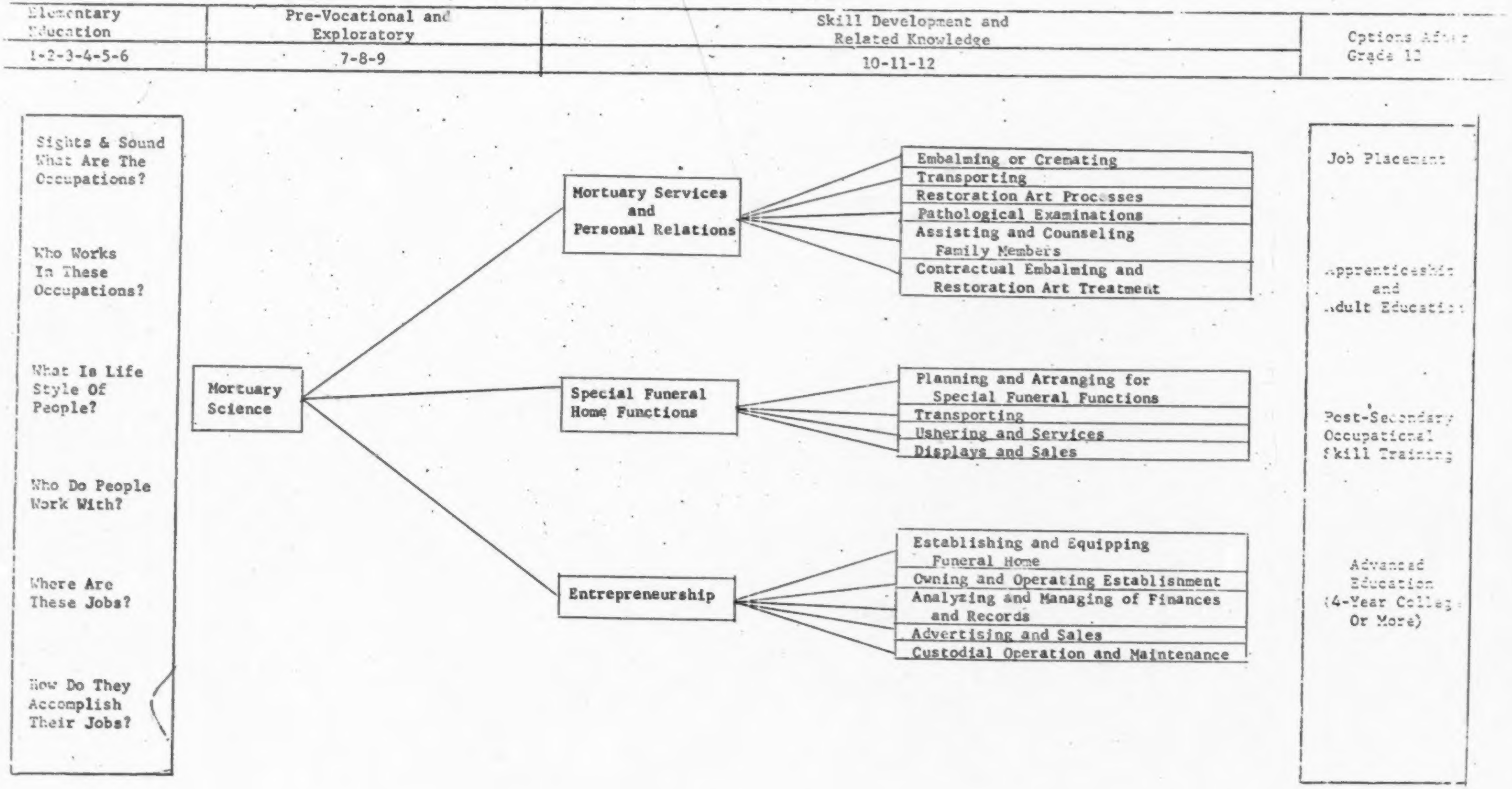
Cluster for
Personal Service Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Barbering
Customer Care and Special Services
Entrepreneurship
Shampooing
Hair Styling
Shaving and Facial Treatment
Scalp and Skin Treatment Operations
Styling and Restoration of Hairpieces
Establishing and Equipping a Shop
Owning and Operating Establishment
Analyzing and Managing of Finances and Records
Advertising and Sales
Custodial Operation and Maintenance of Shop
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

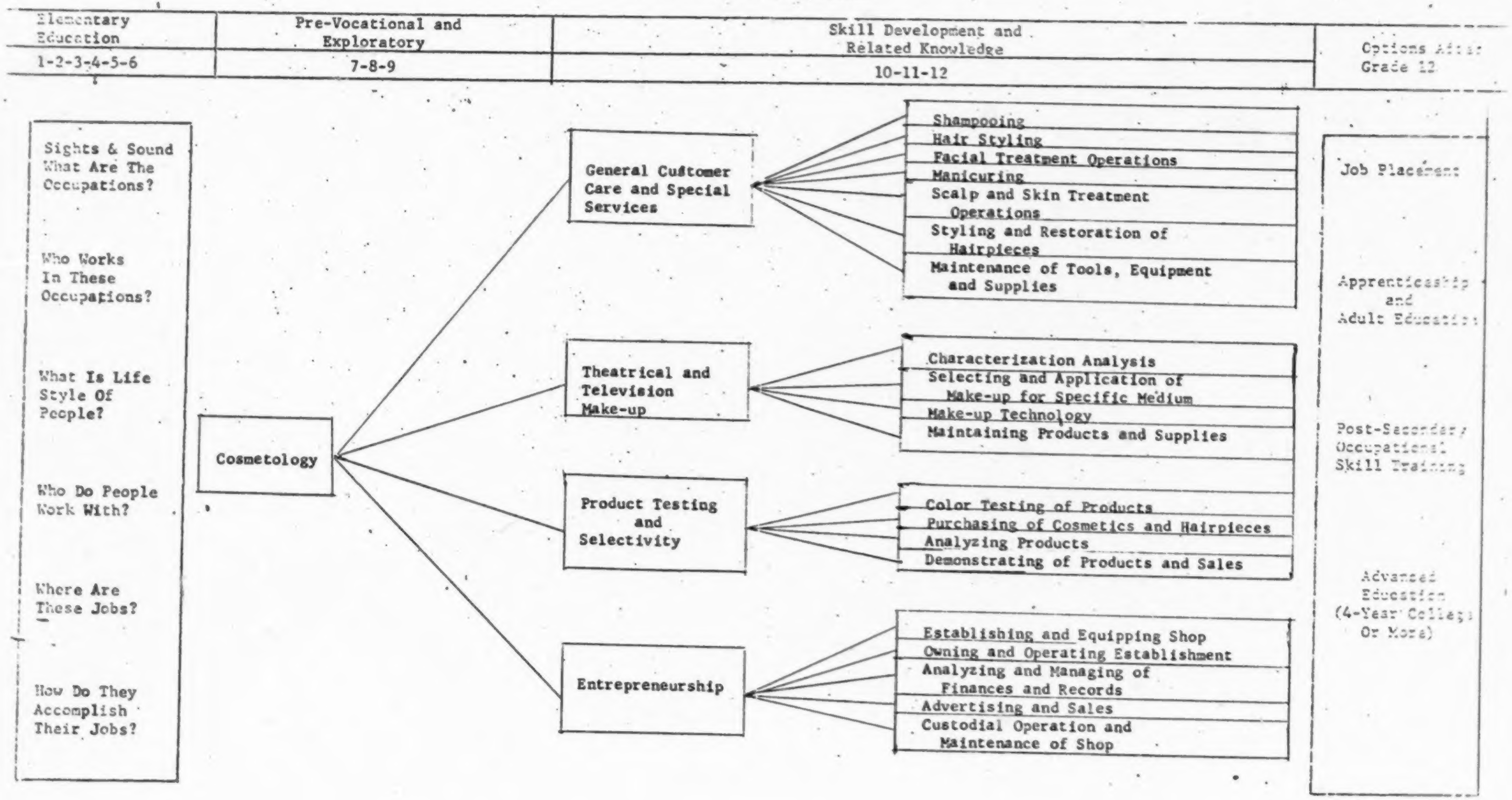
Developed By: [illegible]
Draft
Revised
DATE 4/1/71

Cluster for
Personal Service Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Mortuary Science
Mortuary Services and Personal Relations
Special Funeral Home Functions
Entrepreneurship
Embalming or Cremating
Transporting
Restoration Art Processes
Pathological Examinations
Assisting and Counseling Family Members
Contractual Embalming and Restoration Art Treatment
Planning and Arranging for Special Funeral Functions
Transporting
Ushering and Services
Displays and Sales
Establishing and Equipping Funeral Home
Owning and Operating Establishment
Analyzing and Managing of Finances and Records
Advertising and Sales
Custodial Operation and Maintenance
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

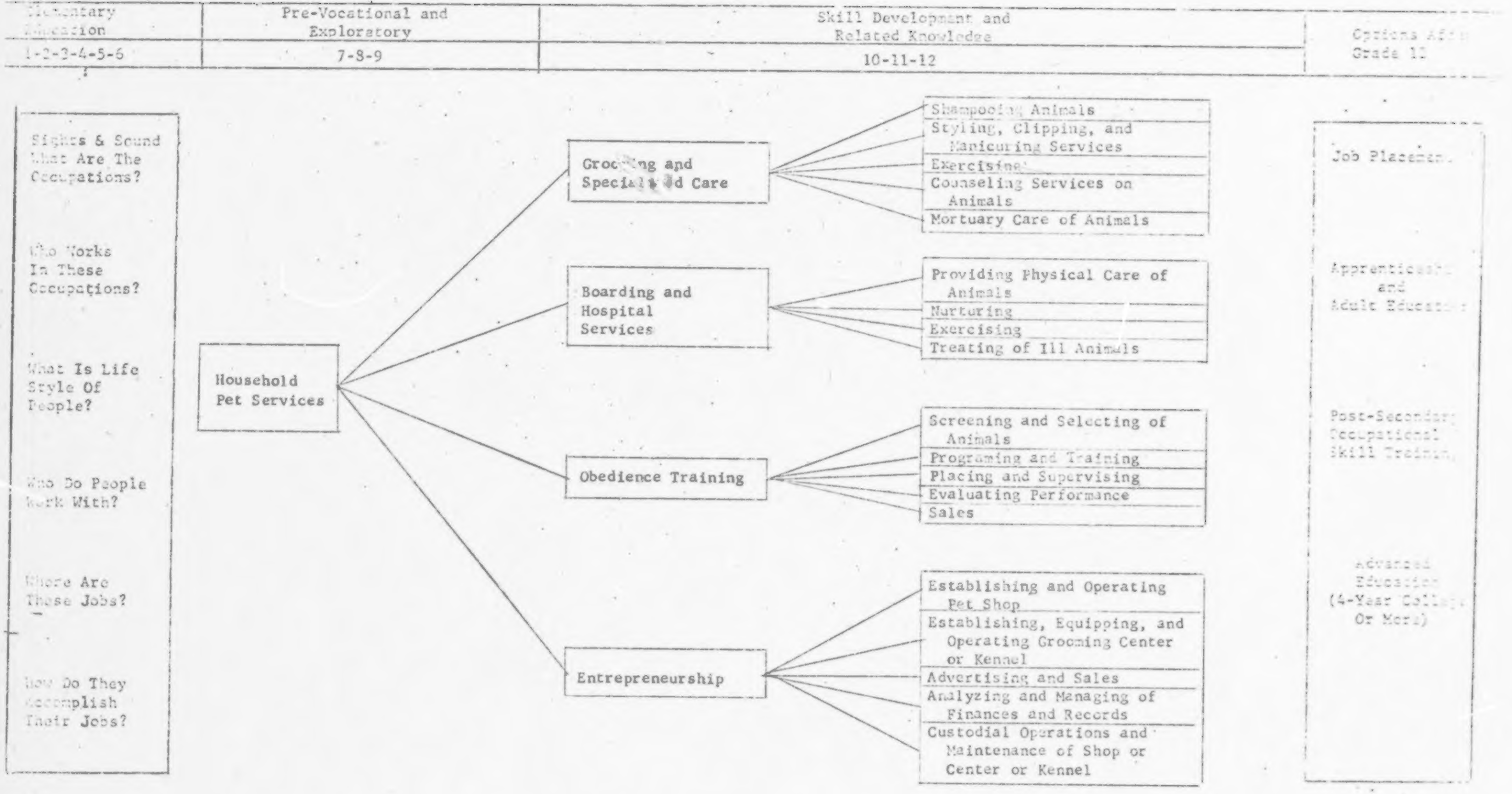
Developed By: [illegible]
Draft
Revised
DATE 4/1/71

Cluster for
Personal Service Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Cosmetology
General Customer Care and Special Services
Shampooing
Hair Styling
Facial Treatment Operations
Manicuring
Scalp and Skin Treatment Operations
Styling and Restoration of Hairpieces
Maintenance of Tools, Equipment and Supplies
Theatrical and Television Make-up
Characterization Analysis
Selecting and Application of Make-up for Specific Medium
Make-up Technology
Maintaining Products and Supplies
Product Testing and Selectivity
Color Testing of Products
Purchasing of Cosmetics and Hairpieces
Analyzing Products
Demonstrating of Products and Sales
Entrepreneurship
Establishing and Equipping Shop
Owning and Operating Establishment
Analyzing and Managing of Finances and Records
Advertising and Sales
Custodial Operation and Maintenance of Shop
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: [illegible]
Draft
Revised
DATE 4/1/71

Cluster for
Personal Service Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Household Pet Services
Grooming and Specialized Care
Shampooing Animals
Styling, Clipping, and Manicuring Services
Exercising
Counseling Services on Animals
Mortuary Care of Animals
Boarding and Hospital Services
Providing Physical Care of Animals
Nurturing
Exercising
Treating of Ill Animals
Obedience Training
Screening and Selecting of Animals
Programing and Training
Placing and Supervising
Evaluating Performance
Sales
Entrepreneurship
Establishing and Operating Pet Shop
Establishing, Equipping, and Operating Grooming Center or Kennel
Advertising and Sales
Analyzing and Managing of Finances and Records
Custodial Operations and Maintenance of Shop or Center or Kennel
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed By: [illegible]
Draft
Revised
DATE 4-1-71

Cluster for
CONSUMER AND HOMEMAKING -- RELATED OCCUPATIONS
(Home Economics)

ntary cation	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

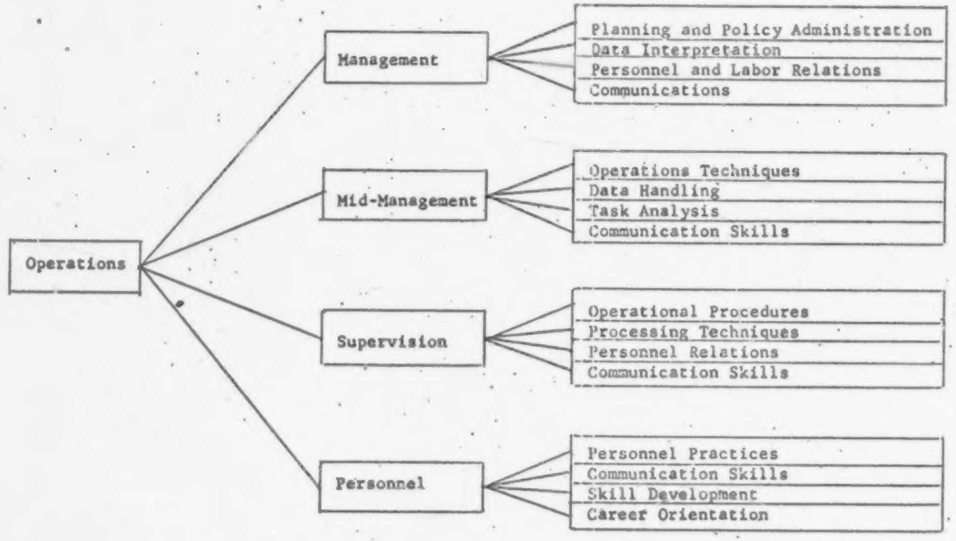
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

Apprenticeship
and
Adult Education

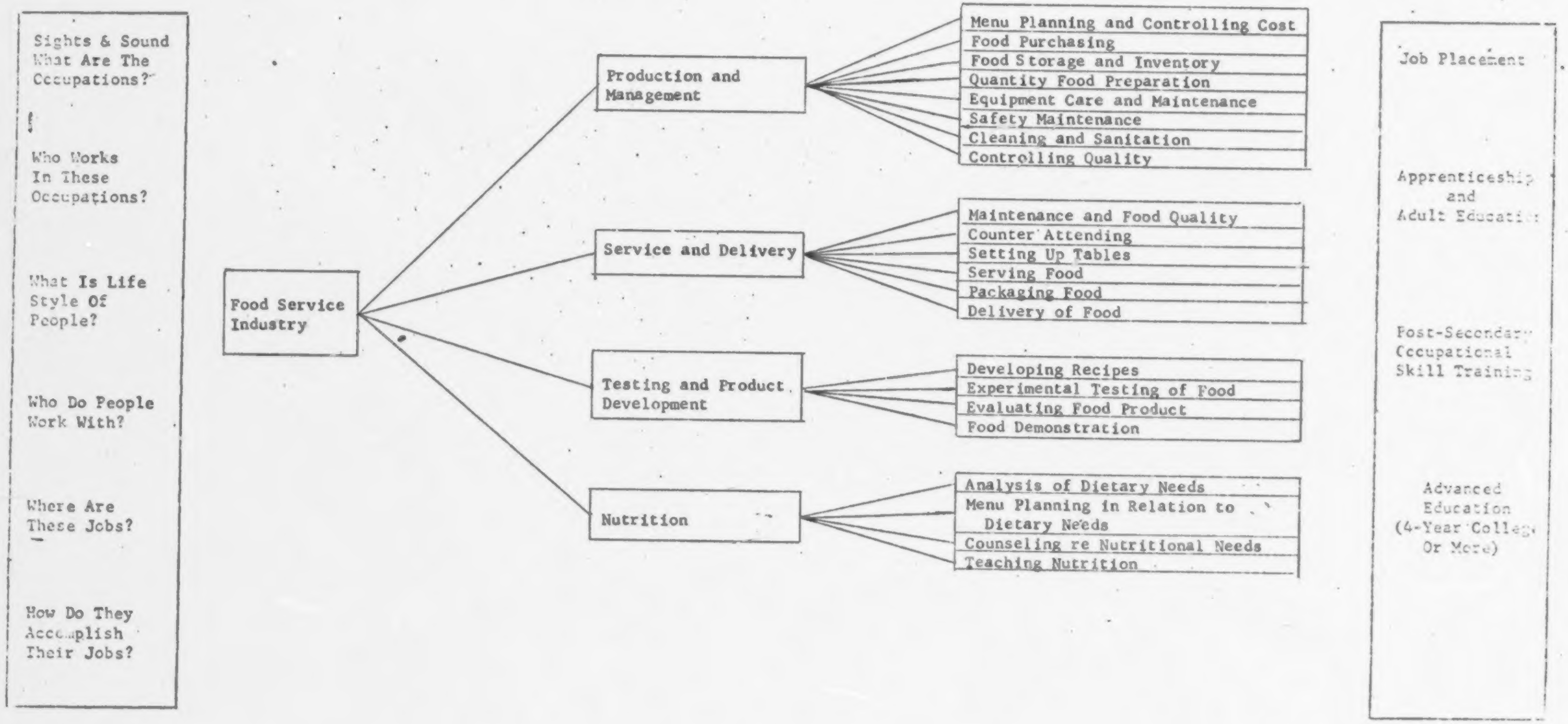
Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

Developed By: USOE/[illegible]
Draft
Revised
DATE 4/1/71

Cluster for
Consumer and Homemaking Education -- Related Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	


Sights & Sound
What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Food Service Industry
Production and Management
Service and Delivery
Testing and Product Development
Nutrition
Menu Planning and Controlling Cost
Food Purchasing
Food Storage and Inventory
Quantity Food Preparation
Equipment Care and Maintenance
Safety Maintenance
Cleaning and Sanitation
Controlling Quality
Maintenance and Food Quality
Counter Attending
Setting Up Tables
Serving Food
Packaging Food
Delivery of Food
Developing Recipes
Experimental Testing of Food
Evaluating Food Product
Food Demonstration
Analysis of Dietary Needs
Menu Planning in Relation to Dietary Needs
Counseling re Nutritional Needs
Teaching Nutrition
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed by: USOE/[illegible]
Draft
Revised
DATE 4/1/71

Cluster for

Consumer and Homemaking Education -- Related Occupations

Elementary Education	**Pre-Vocational and Exploratory**	Skill Development and Related Knowledge	Options Aft Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

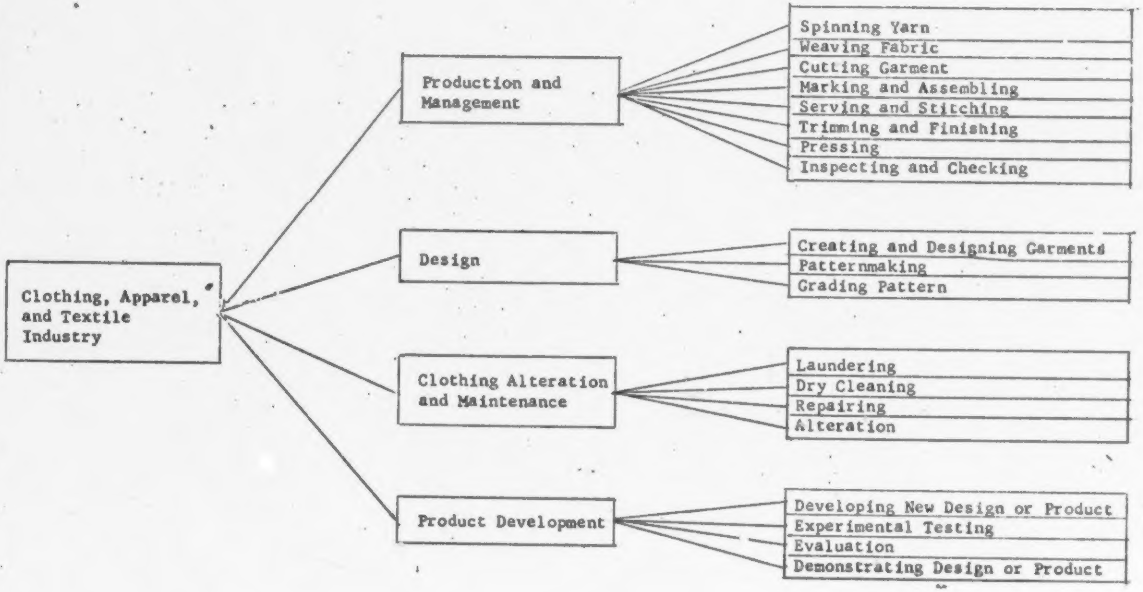
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

Apprenticeship
and
Adult Educatio

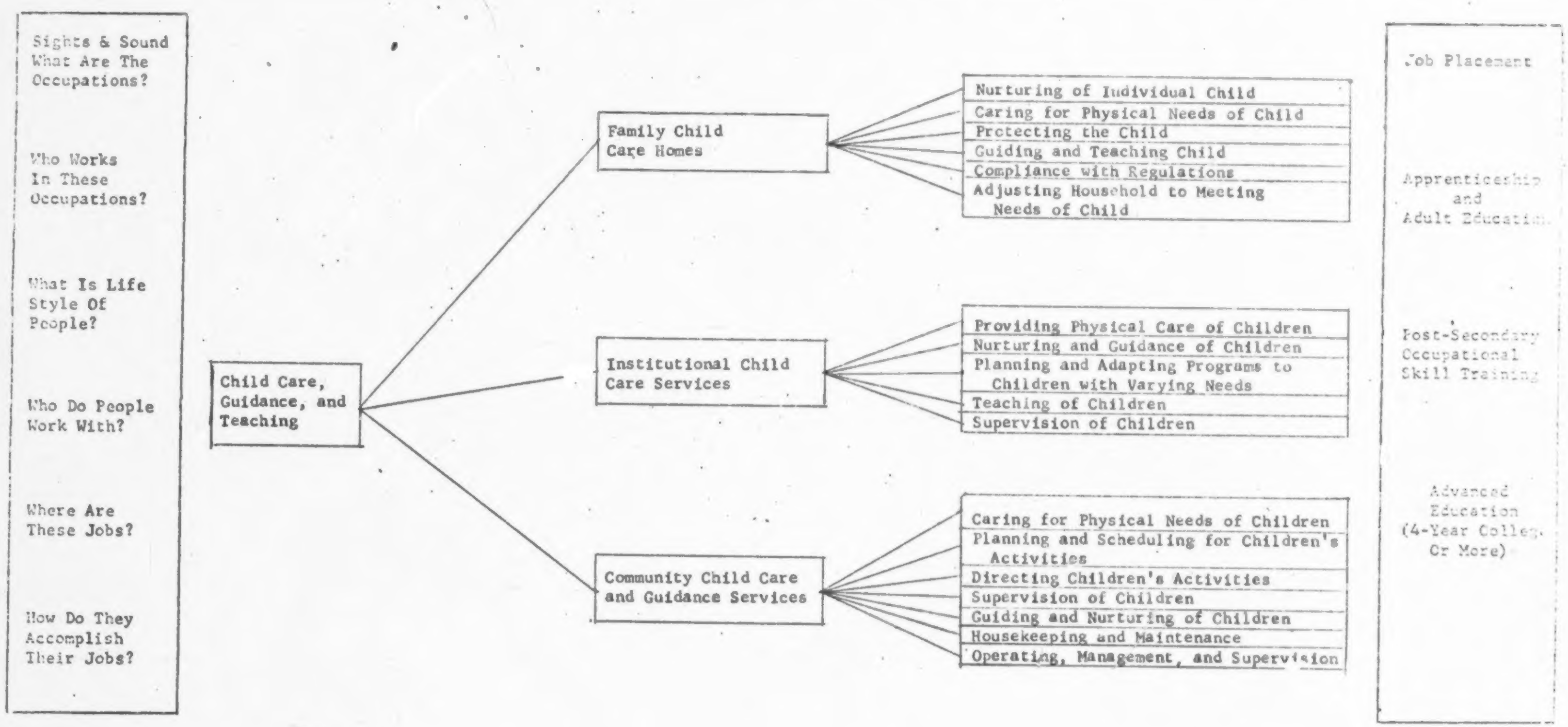
Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year Colleg
Or More)

Developed by: [illegible]
Draft
Revised
DATE 4/1/71

Cluster for
Consumer and Homemaking Education -- Related Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



Sights & Sound
What Are The Occupations?

Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?

Child Care, Guidance, and Teaching

Family Child Care Homes
- Nurturing of Individual Child
- Caring for Physical Needs of Child
- Protecting the Child
- Guiding and Teaching Child
- Compliance with Regulations
- Adjusting Household to Meeting Needs of Child

Institutional Child Care Services
- Providing Physical Care of Children
- Nurturing and Guidance of Children
- Planning and Adapting Programs to Children with Varying Needs
- Teaching of Children
- Supervision of Children

Community Child Care and Guidance Services
- Caring for Physical Needs of Children
- Planning and Scheduling for Children's Activities
- Directing Children's Activities
- Supervision of Children
- Guiding and Nurturing of Children
- Housekeeping and Maintenance
- Operating, Management, and Supervision

Job Placement

Apprenticeship and Adult Education

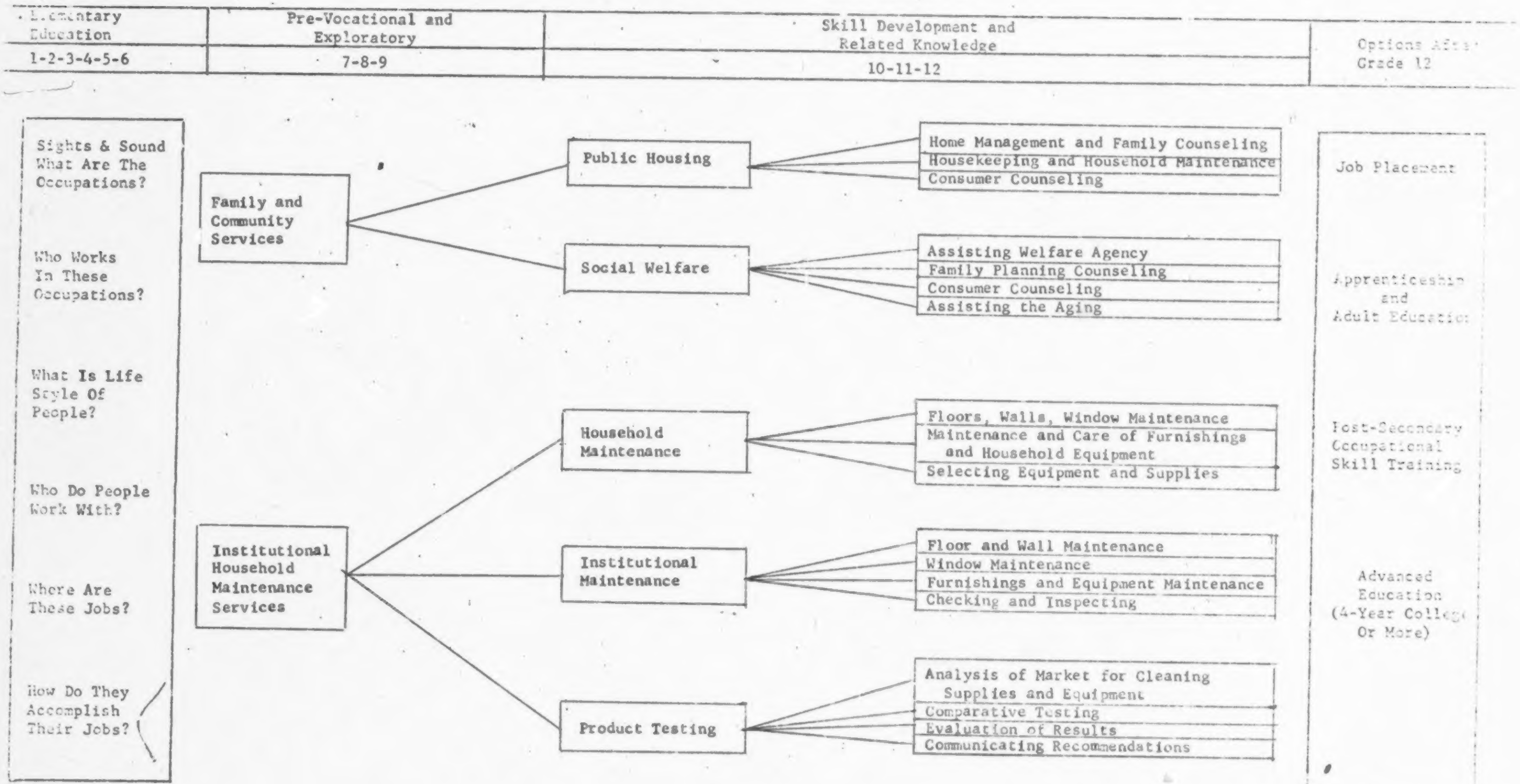
Post-Secondary Occupational Skill Training

Advanced Education (4-Year College Or More)

Developed by: USCE/[illegible]
Draft
Revised
DATE 4/1/71

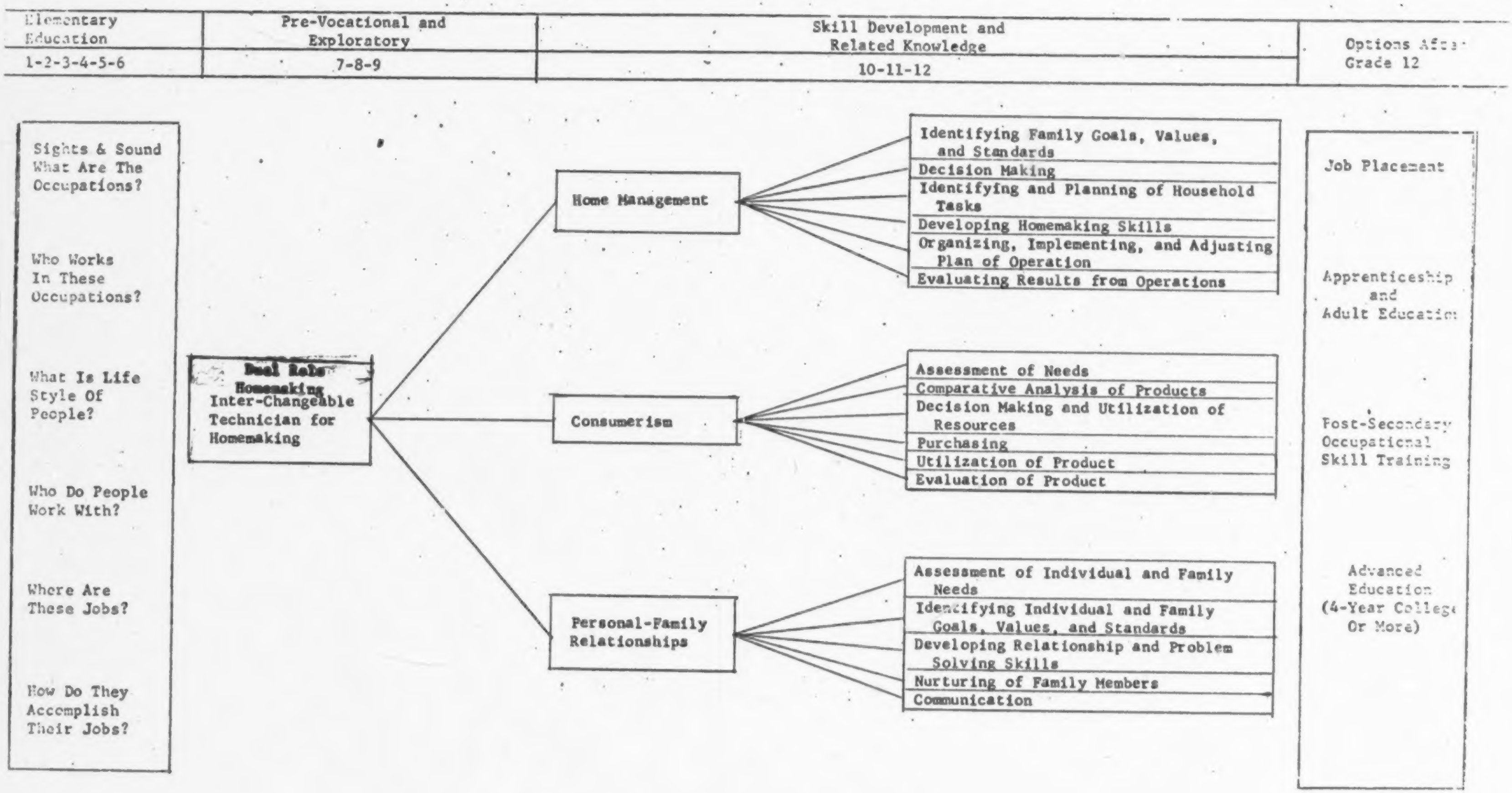
Cluster for

Consumer and Homemaking Education -- Related Occupations


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Family and Community Services
Institutional Household Maintenance Services
Public Housing
Social Welfare
Household Maintenance
Institutional Maintenance
Product Testing
Home Management and Family Counseling
Housekeeping and Household Maintenance
Consumer Counseling
Assisting Welfare Agency
Family Planning Counseling
Consumer Counseling
Assisting the Aging
Floors, Walls, Window Maintenance
Maintenance and Care of Furnishings and Household Equipment
Selecting Equipment and Supplies
Floor and Wall Maintenance
Window Maintenance
Furnishings and Equipment Maintenance
Checking and Inspecting
Analysis of Market for Cleaning Supplies and Equipment
Comparative Testing
Evaluation of Results
Communicating Recommendations
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for
Consumer and Homemaking Education -- Related Occupations

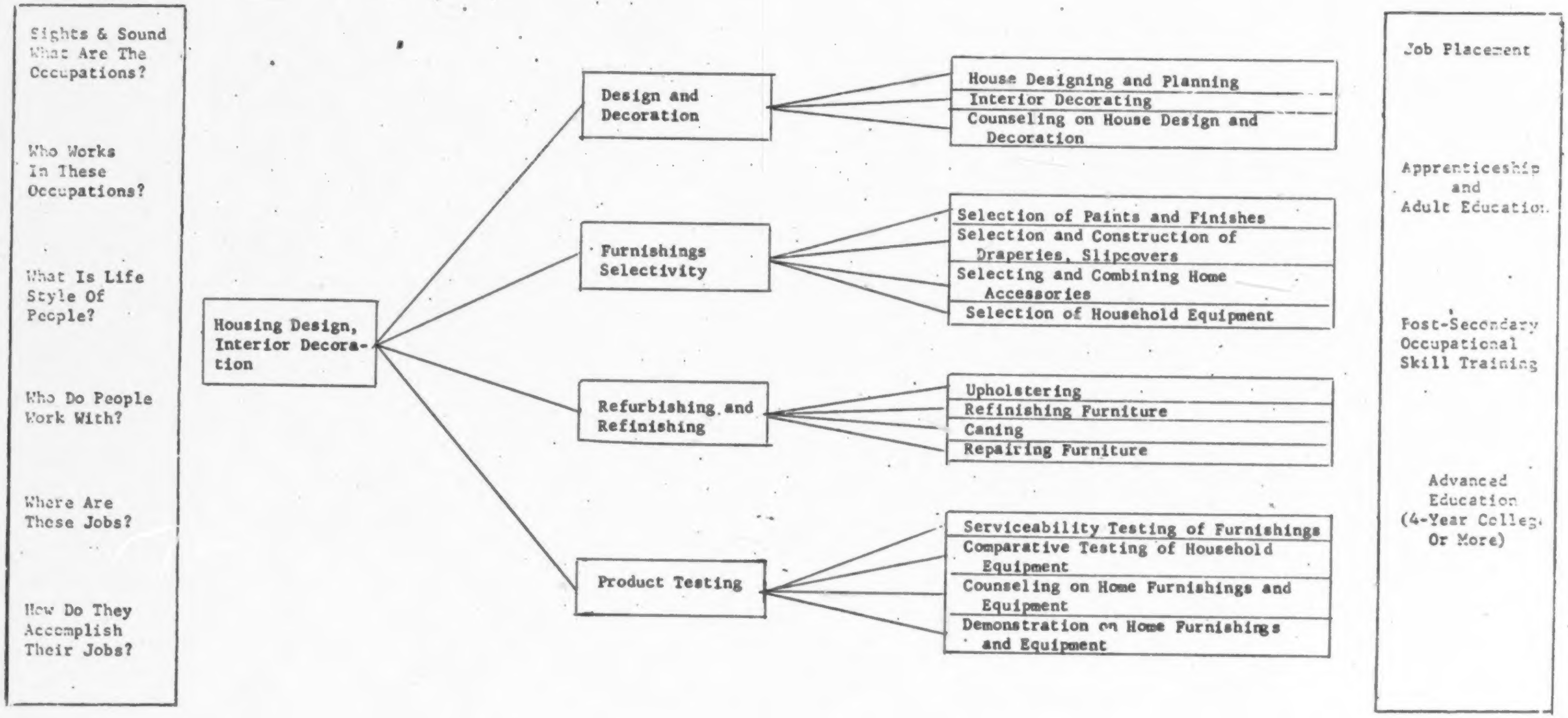

Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Dual Role Homemaking
Inter-Changeable Technician for Homemaking
Home Management
Consumerism
Personal-Family Relationships
Identifying Family Goals, Values, and Standards
Decision Making
Identifying and Planning of Household Tasks
Developing Homemaking Skills
Organizing, Implementing, and Adjusting Plan of Operation
Evaluating Results from Operations
Assessment of Needs
Comparative Analysis of Products
Decision Making and Utilization of Resources
Purchasing
Utilization of Product
Evaluation of Product
Assessment of Individual and Family Needs
Identifying Individual and Family Goals, Values, and Standards
Developing Relationship and Problem Solving Skills
Nurturing of Family Members
Communication
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/1/71

Cluster for

Consumer and Homemaking Education -- Related Occupations

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

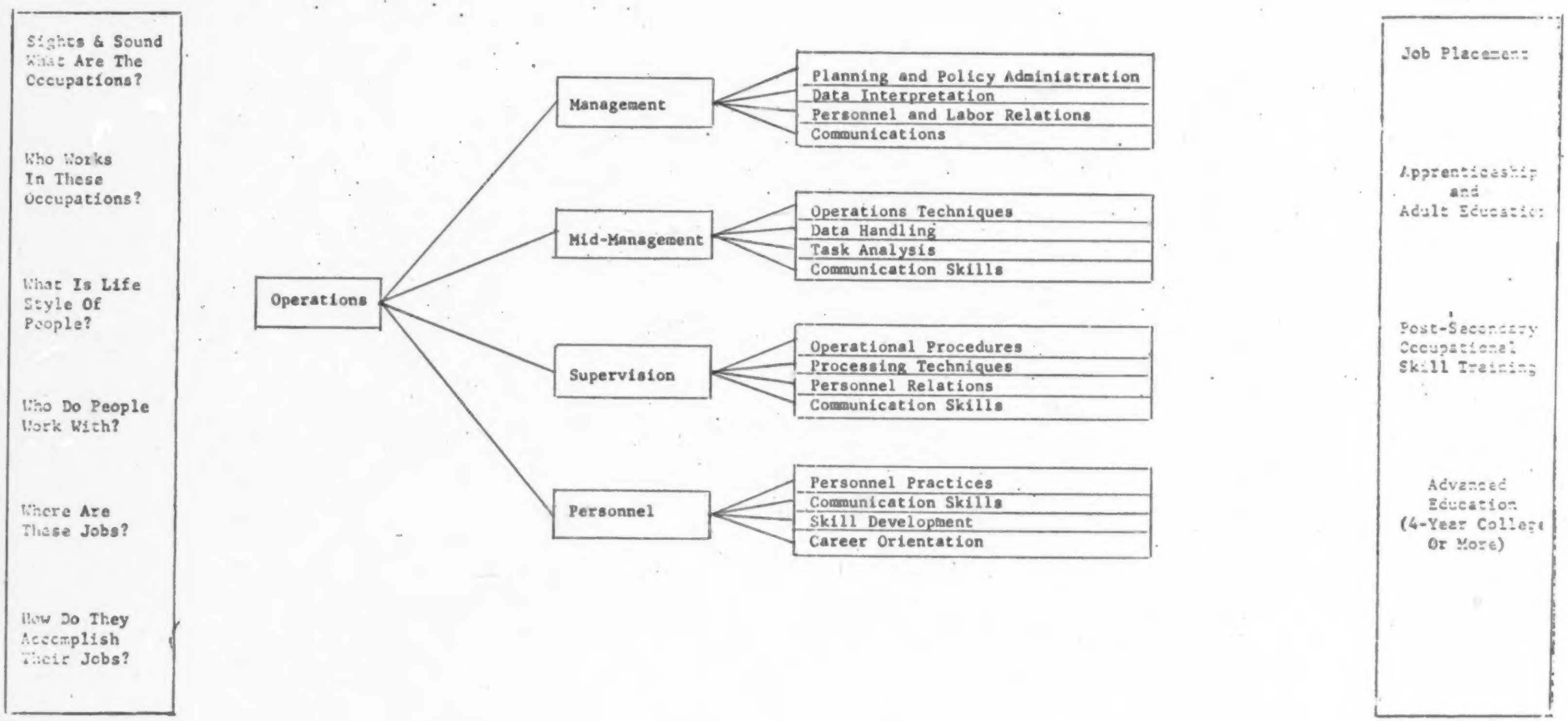

Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Housing Design, Interior Decoration
Design and Decoration
Furnishings Selectivity
Refurbishing and Refinishing
Product Testing
House Designing and Planning
Interior Decorating
Counseling on House Design and Decoration
Selection of Paints and Finishes
Selection and Construction of Draperies, Slipcovers
Selecting and Combining Home Accessories
Selection of Household Equipment
Upholstering
Refinishing Furniture
Caning
Repairing Furniture
Serviceability Testing of Furnishings
Comparative Testing of Household Equipment
Counseling on Home Furnishings and Equipment
Demonstration on Home Furnishings and Equipment
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed By: USOE/[illegible]
Draft
Revised
DATE 4-1-71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES

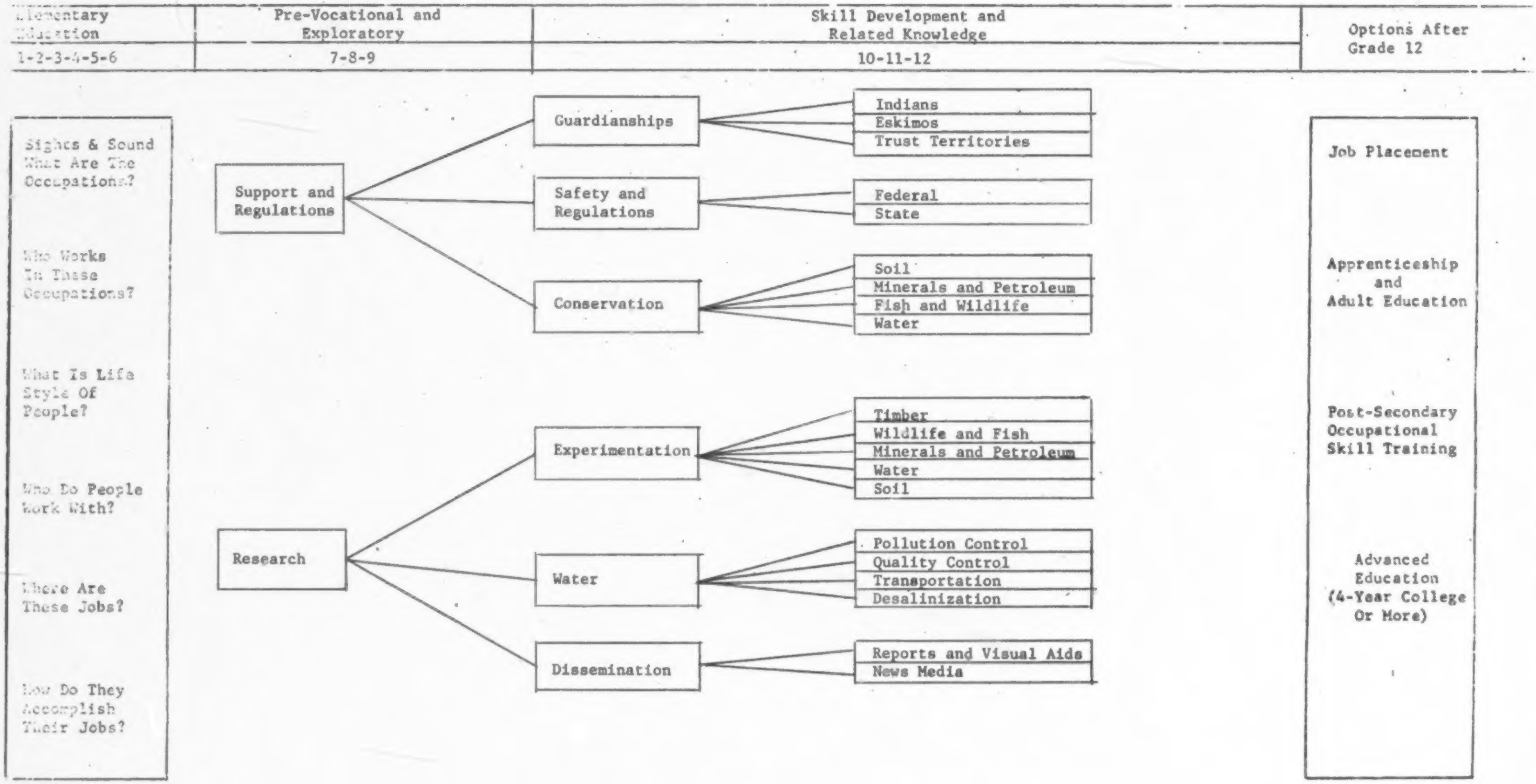
Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	



FILMED FROM BEST AVAILABLE COPY

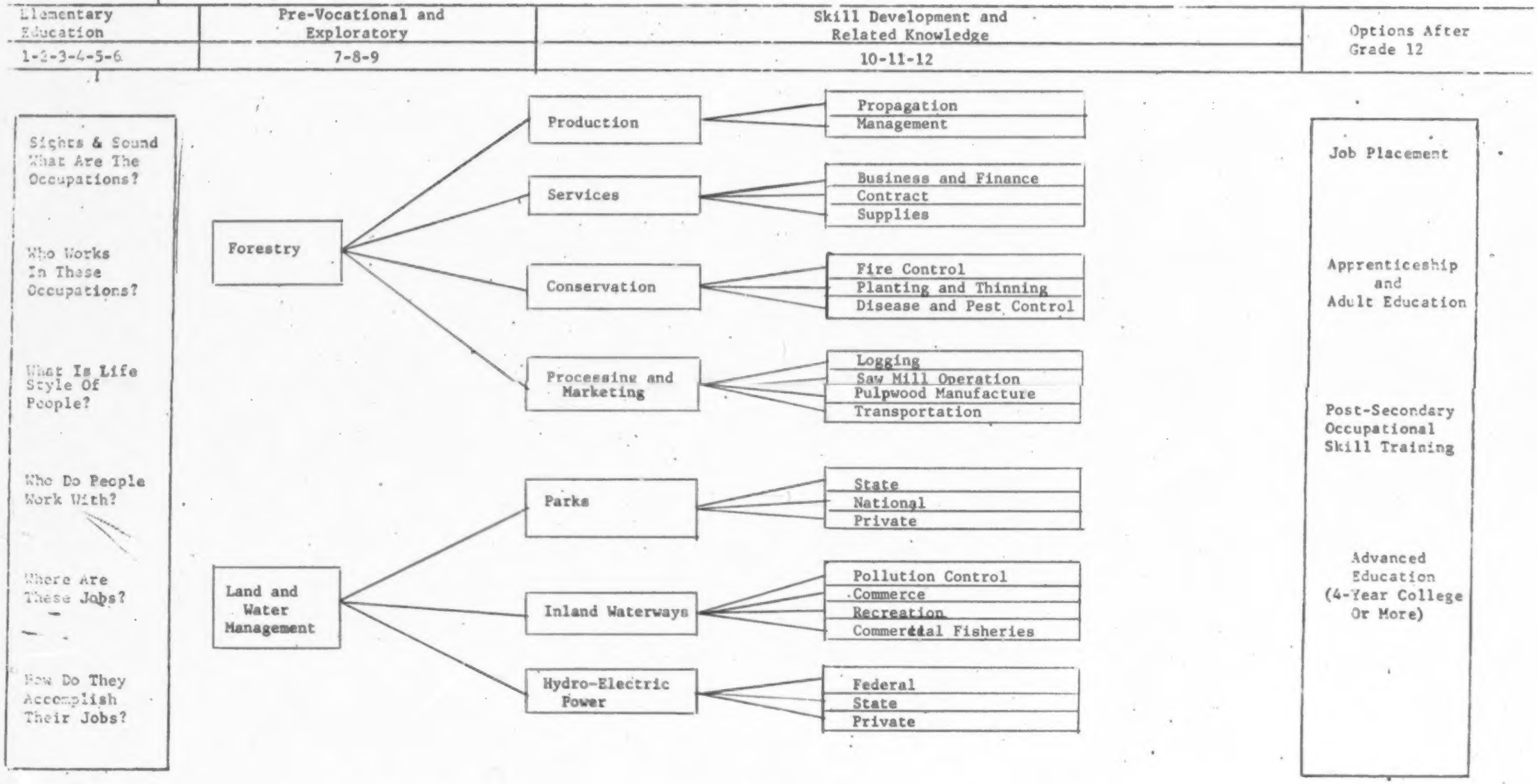
Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Natural Resources)



Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Natural Resources)



Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Natural Resources)

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

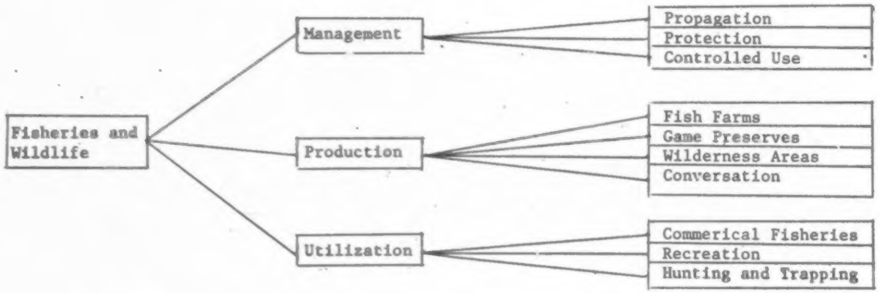
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

Apprenticeship
and
Adult Education

Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Natural Resources)

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

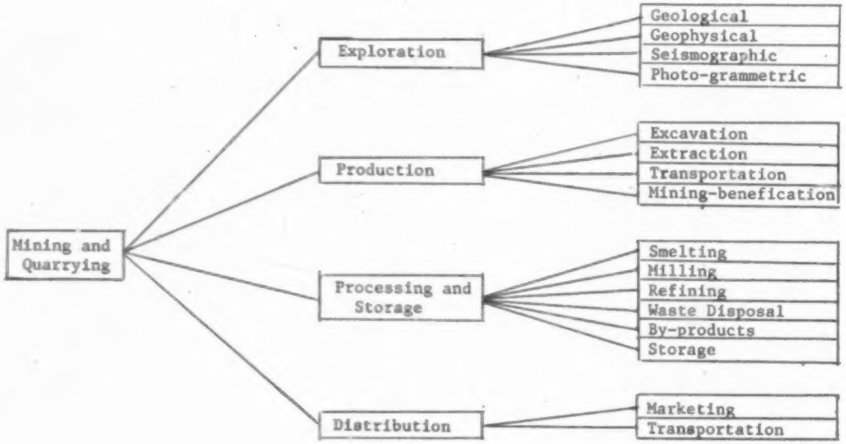
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

Apprenticeship and Adult Education

Post-Secondary Occupational Skill Training

Advanced Education (4-Year College Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Natural Resources)

Elementary Education	Pre-Vocational and Exploratory	Skill Development and Related Knowledge	Options After Grade 12
1-2-3-4-5-6	7-8-9	10-11-12	

Sights & Sound What Are The Occupations?

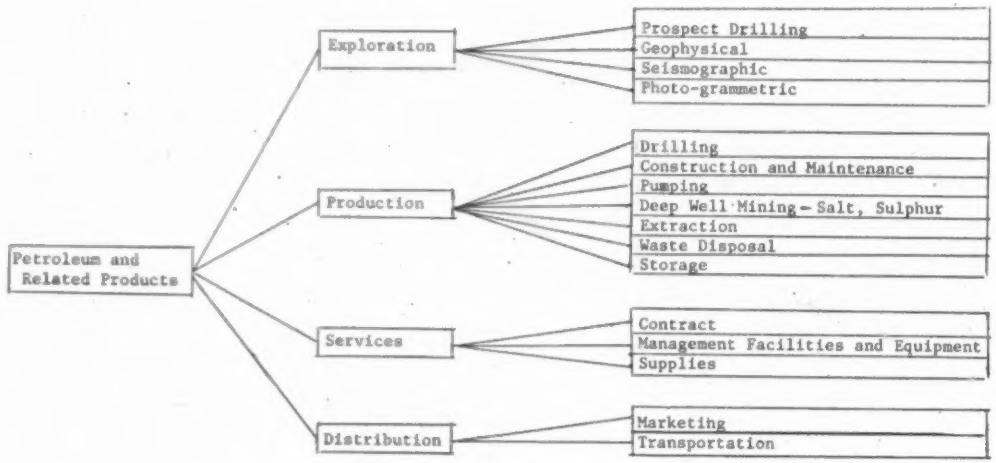
Who Works In These Occupations?

What Is Life Style Of People?

Who Do People Work With?

Where Are These Jobs?

How Do They Accomplish Their Jobs?



Job Placement

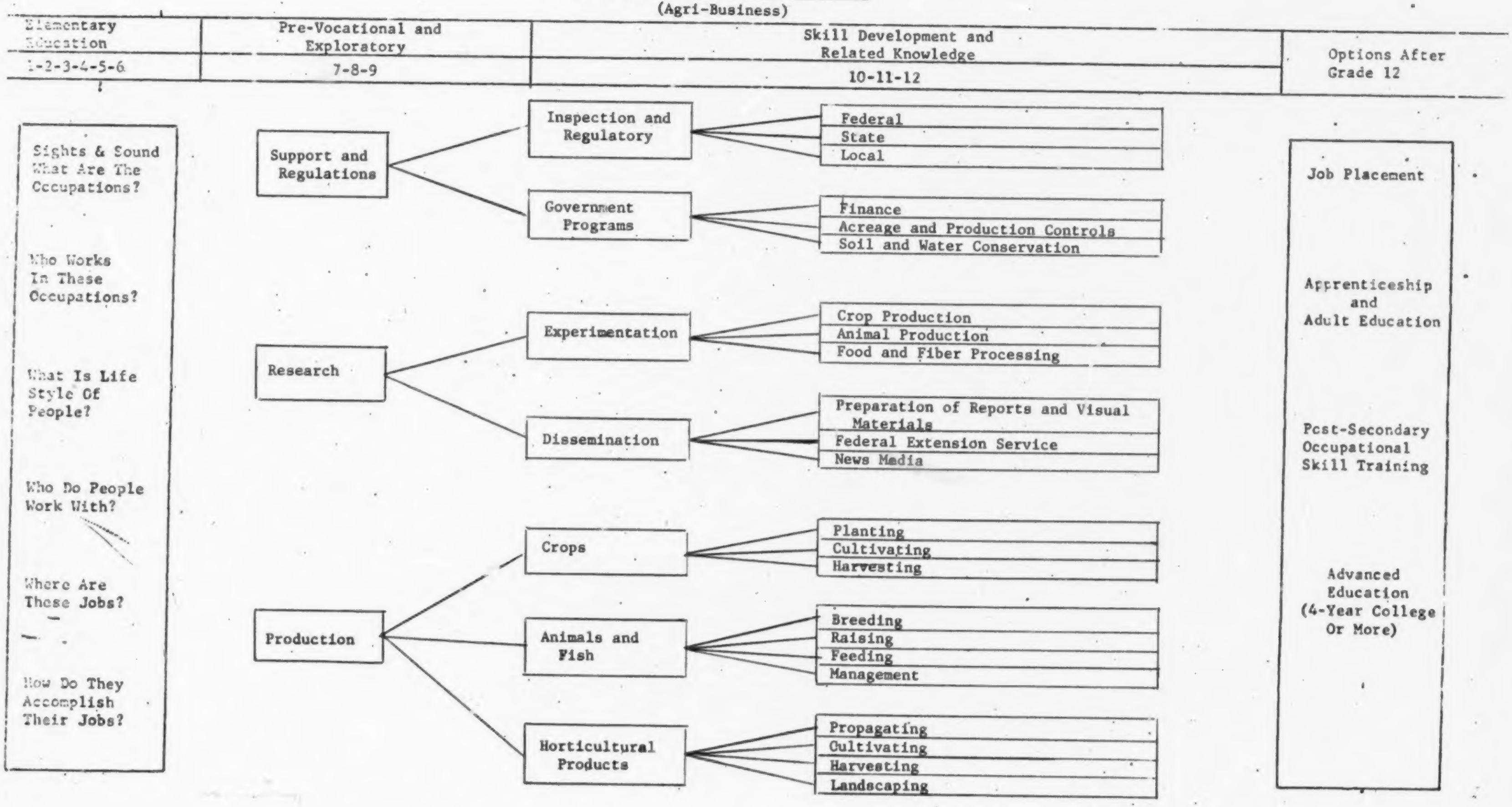
Apprenticeship
and
Adult Education

Post-Secondary
Occupational
Skill Training

Advanced
Education
(4-Year College
Or More)

Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Agri-Business)


Elementary Education
1-2-3-4-5-6
Pre-Vocational and Exploratory
7-8-9
Skill Development and Related Knowledge
10-11-12
Options After Grade 12
Sights & Sound What Are The Occupations?
Who Works In These Occupations?
What Is Life Style Of People?
Who Do People Work With?
Where Are These Jobs?
How Do They Accomplish Their Jobs?
Support and Regulations
Research
Production
Inspection and Regulatory
Government Programs
Experimentation
Dissemination
Crops
Animals and Fish
Horticultural Products
Federal
State
Local
Finance
Acreage and Production Controls
Soil and Water Conservation
Crop Production
Animal Production
Food and Fiber Processing
Preparation of Reports and Visual Materials
Federal Extension Service
News Media
Planting
Cultivating
Harvesting
Breeding
Raising
Feeding
Management
Propagating
Cultivating
Harvesting
Landscaping
Job Placement
Apprenticeship and Adult Education
Post-Secondary Occupational Skill Training
Advanced Education (4-Year College Or More)

FILMED FROM BEST AVAILABLE COPY

Developed By: USOE/DVTE
Draft
Revised
DATE 4/6/71

Cluster for
AGRI-BUSINESS AND NATURAL RESOURCES
(Agri-Business)